TM-U375/TM-U375P

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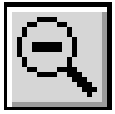

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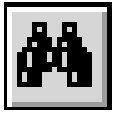

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EPSON®

ESC/POS™
Information Manual

Guide to
TM-U375/U375P

SEIKO EPSON CORPORATION

400609200

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ESC/POS™ Information Manual
Guide to TM–U375/U375P
9603-01

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Introduction

ESC/POS

The market for store automation equipment is changing rapidly with the widespread introduction of POS (point of sale) terminals. These terminals are now appearing even in small retail stores and specialty shops. They occupy a secure position in the range of applications available for personal computers.

As more personal computers come to be used as POS terminals, the demand for matching standardized peripheral devices is expected to rise. At present, however, many of the competing POS terminal printer displays on the market employ mutually incompatible command sets. This imposes limits on the expandability and range of applications possible with PC-based systems. There is a need for a new command set designed to provide the expandability and universal applicability demanded by the market.

To meet this need, Seiko Epson Corporation proposes the adoption of a newly developed command set to standardize POS terminal peripheral devices: ESC/POS (Epson Standard Code for Point of Sale).

The aim when developing ESC/POS was to create a set of control codes that could be used to operate any output device connected to a POS terminal. These new codes are intended to replace the mutually incompatible command sets previously in use.

TM/DM series models already support ESC/POS, and they have been evaluated highly in the marketplace.

Seiko Epson Corporation plans to produce new models in the TM/DM series offering ESC/POS support and to continue to work for the standardization of the entire POS environment to promote the dissemination of ESC/POS.

About This Manual

- **Chapter 1** contains a table of supported commands, descriptions of all the commands arranged by function with program examples and print samples, and character code tables.
- **Chapter 2** contains an example showing procedures and a program for combining system processes with the TM-U375, DM-D202II, and a drawer.
- **Chapter 3** contains a table of the commands listed by function type and a table showing which commands are supported by various EPSON printers.

Features

The TM-U375 and TM-U375P are high-performance POS printers that can print on slip, validation, and journal paper. The printers have the following features:

- ❏ World's smallest multi-function 1.5 station printer.
- ❏ High-speed printing using logic seeking.
- ❏ Easy problem handling (e.g., paper jams or objects dropped into the printer) via a clamshell mechanism.
- ❏ Two cut-sheet entrances: from above for validation paper and from the front for slip paper.
- ❏ Both journal and receipt printing with pressure-sensitive paper.
- ❏ Free-format printing in page mode.
- ❏ Various check printing patterns.
- ❏ Logic seeking and page mode for check printing.
- ❏ Movable platen for easy paper insertion.
- ❏ Paper load switch for easy paper roll loading.
- ❏ Control capability for two drawers.
- ❏ Selectable character size (7×9 or 5×9 font).
- ❏ Command protocol based on the ESC/POS™ standard.
- ❏ Automatic Status Back (ASB) function that automatically transmits changes in printer status.
- ❏ EPSON intelligent module connection (TM-U375 only).
- ❏ EPSON customer display series connection (TM-U375 only).

Options and Accessories

- ❏ EPSON power supply unit, PS-150 (not required when the TM-U375 (only) is connected to an intelligent module).
- ❏ Direct connection display modules, DM-D102 and DM-D203 (for use with TM-U375 only).
- ❏ Pass-through customer display modules, DM-D101II and DM-D202II (for use with TM-U375 only).
- ❏ EPSON ribbon cassette, ERC-38.

Specifications

- Printing specifications

Printing method:	9-pin, serial impact dot matrix
Printing speed:	Approximately 3.5 LPS (40 columns, 16 CPI, continuous printing) Approximately 5.4 LPS (20 columns, 16 CPI, continuous printing)

  Number of printable columns: 40/33

- Character specifications

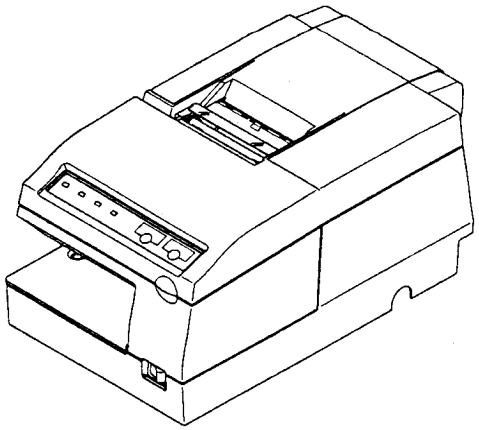
Character fonts:	7 × 9/5 × 9
Character pitch:	16/13.3 CPI
Character size:	1.24(W) × 3.1(H) mm/1.56(W) × 3.1(H) mm
Character sets:	ASCII: 95 characters International: 32 characters Extended graphics: 128 characters × 6 pages

- Paper specifications

Paper size:	Paper roll: 75.5-76.5(W) mm × 83.0 mm diameter Slip paper: 70(W) × 160(L) mm – 182(W) × 257(L) mm Validation paper: 135(W) × 70(L) mm – 182(W) × 257(L) mm
Thickness:	Paper roll: 0.06 mm – 0.085 mm Slip paper: 0.09 mm – 0.31 mm

- Interface: RS-232 (serial interface)
  or
  IEEE-1284 (parallel interface)

- Data buffer: 4K or 40 bytes (selectable by DIP switch)



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Chapter 1
Command Descriptions

Following this table are all the commands organized by function and described with program examples and print samples. The print samples are images of the printing results of the program examples; they do not represent actual printing.

Supported Commands

Command	Name	Function Type	Page Number
HT	Horizontal tab	Print position	1-27
LF	Print and line feed	Print	1-4
FF	① Print and eject cut sheet (in standard mode) ② Print and return to standard mode (in page mode)	Print	1-5
CR	Print and carriage return	Print	1-4
CAN	Cancel print data in page mode	Character	1-17
DLE EOT	Real-time status transmission	Status	1-36
DLE ENQ	Real-time request to printer	Miscellaneous function	1-46
ESC SP	Set right-side character spacing	Character	1-9
ESC !	Select print mode(s)	Character	1-13
ESC $	Set absolute print position	Print position	1-24
ESC %	Select/cancel user-defined character set	Character	1-10
ESC &	Define user-defined characters	Character	1-10
ESC *	Select bit-image mode	Bit image	1-30
ESC –	Turn underline mode on/off	Character	1-14
ESC 2	Select default line spacing	Line spacing	1-7
ESC 3	Set line spacing	Line spacing	1-7
ESC <	Return home	Mechanism control	1-40
ESC =	Select peripheral device	Miscellaneous function	1-45
ESC ?	Cancel user-defined characters	Character	1-10
ESC @	Initialize printer	Miscellaneous function	1-43
ESC C	Set cut sheet eject length	Line spacing	1-8
ESC D	Set horizontal tab positions	Print position	1-27
ESC E	Turn emphasized mode on/off	Character	1-15
ESC G	Turn double-strike mode on/off	Character	1-15
ESC J	Print and feed paper	Print	1-6
ESC L	Select page mode	Miscellaneous function	1-46
ESC R	Select an international character set	Character	1-11

Command	Name	Function Type	Page Number
ESC T	Select print direction in page mode	Print position	1-29
ESC U	Turn unidirectional printing mode on/off	Mechanism control	1-41
ESC V	Turn 90° clockwise rotation mode on/off	Character	1-17
ESC W	Set printing area in page mode	Print position	1-28
**ESC **	Set relative print position	Print position	1-24
ESC a	Select justification	Print position	1-25
ESC c 0	Select paper type(s) for printing	Printing paper	1-21
ESC c 1	Select paper type(s) for command settings	Printing paper	1-22
ESC c 3	Select paper sensor(s) to output paper-end signals	Paper sensor	1-20
ESC c 4	Select paper sensor(s) to stop printing	Paper sensor	1-19
ESC c 5	Enable/disable panel buttons	Panel button	1-18
ESC d	Print and feed ***n*** lines	Print	1-6
ESC f	Set cut sheet wait time	Printing paper	1-23
ESC p	Generate pulse	Miscellaneous function	1-45
ESC q	Paper release	Mechanism control	1-41
ESC t	Select character code table	Character	1-12
ESC u	Transmit peripheral device status	Status	1-39
ESC v	Transmit paper sensor status	Status	1-40
ESC {	Turn upside-down printing mode on/off	Character	1-16
GS *	Define downloaded bit image	Bit image	1-31
GS /	Print downloaded bit image	Bit image	1-31
GS E	Select head control method	Miscellaneous function	1-43
GS I	Transmit printer ID	Miscellaneous function	1-44
GS L	Set left margin	Print position	1-26
GS P	Set horizontal and vertical motion units	Miscellaneous function	1-42
GS W	Set printing area width	Print position	1-26
GS a	Enable/disable Automatic Status Back (ASB)	Status	1-33
GS r	Transmit status	Status	1-35

Using Bit Value Tables

For each command that has a complex method of determining the variable ***n***, there is a table showing how to calculate the variable in three numbering systems: binary, hexadecimal, and decimal.

When you look at the table, first find the value of each component of the variable. Then add the values of the components together to determine the value of the variable ***n***.

For example, here is how you would use the table below, which selects the print mode, to combine double height, double width, and underline. In the table, you see that bit 4 on (or hex 10 or decimal 16) turns on double height, bit 5 on (or hex 20 or decimal 32) turns on double width, and bit 7 on (or hex 80 or decimal 128) turns on underline mode.

To combine all three, turn on bits 4, 5, and 7, which is 10110000 in binary. Or you can add the hex values 10, 20, and 80 for the hex sum of B0, or you can add the decimal values 16, 32, and 128 for the decimal value of 176.

Therefore, you send the following to turn on double height, double width, and underline, depending on the numbering system used:

ASCII	ESC	!	*n*
Hex	1B	21	B0
Decimal	28	33	176

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Character font 5 x 9 selected.
	On	01	1	Character font 7 x 9 selected.
1, 2	—	—	—	Undefined.
3	Off	00	0	Emphasized mode not selected.
	On	08	8	Emphasized mode selected.
4	Off	00	0	Double-height mode not selected.
	On	10	16	Double-height mode selected.
5	Off	00	0	Double-width mode not selected.
	On	20	32	Double-width mode selected.
6	—	—	—	Undefined.
7	Off	00	0	Underline mode not selected.
	On	80	128	Underline mode selected.

Note that the program examples throughout this chapter use decimal numbers, but binary, decimal, and hexadecimal numbers all have the same printing results.

Print Commands

The TM-U375/U375P supports the following commands for printing characters and advancing paper:

Command	Name
LF	Print and line feed
CR	Print and carriage return
FF	① Print and eject cut sheet (in standard mode)
	② Print and return to standard mode (in page mode)
ESC J	Print and feed paper
ESC d	Print and feed ***n*** lines

LF

[Name] Print and line feed

[Format] ASCII LF

Hex 0A

Decimal 10

LF prints the data in the print buffer and feeds one line. The amount of paper fed per line is based on the value set using the line spacing command. The default setting is 1/6 inch.

Program Example

```
PRINT #1, "AAAAA"; CHR$(&HA);
PRINT #1, "BBBBB"; CHR$(&HA);
```

Print Sample

```
AAAAA
BBBBB
```

CR

[Name] Print and carriage return

[Format] ASCII CR

Hex 0D

Decimal 13

CR prints one line of data from the print buffer and does not feed the paper. This command sets the print starting position to the beginning of the line.

Program Example

```
PRINT #1, "AAAAA"; CHR$(&HD);
PRINT #1, "     BBBBB"; CHR$(&HA);
```

Print Sample

```
AAAAABBBBB
```

FF

[Name] ① Print and eject cut sheet (in standard mode)

② Print and return to standard mode (in page mode)

[Format]

ASCII	FF
Hex	0C
Decimal	12

In standard mode, **FF** prints the data in the print buffer and ejects the cut sheet (slip or validation paper). This command is enabled only when a cut sheet is selected for printing. When the eject length has been set by **ESC C**, the printer ejects the cut sheet based on the current eject length regardless of the cut-sheet paper sensor state. Otherwise, the printer ejects the cut sheet completely. Paper from the paper roll is not ejected, even if it is also selected.

After cut-sheet ejection, the paper roll is selected for printing. The cut sheet is ejected in the forward direction only.

In page mode, **FF** prints the data in the print buffer collectively and returns to standard mode. The buffer data is deleted after being printed, but the paper is not ejected.

Program Example <standard mode>

```
PRINT #1, CHR$(&H1B);"c0";CHR$(4);← Select slip
PRINT #1, "AAAAA"; CHR$(&HA);
PRINT #1, "BBBBB"; CHR$(&HC);
```

Print Sample <standard mode>

```
AAAAA
BBBBB




The paper is completely ejected.
```

Program Example <page mode>

```
PRINT #1, CHR$(&H1B);"L";←Select page mode
PRINT #1, CHR$(&H1B);"W";CHR$(0);CHR$(0);CHR$(0);
CHR$(0);CHR$(30);CHR$(0);CHR$(30);CHR$(0);
PRINT #1, CHR$(&H1B);"T";CHR$(0);
PRINT #1, "AAAAA"; CHR$(&HA);←Store characters for printing
PRINT #1, "BBBBB"; CHR$(&HA);←Store characters for printing
PRINT #1, "CCCCC"; CHR$(&HC);←Batch print
```

Print Sample <page mode>

```
AAAAA
BBBBB
CCCCC
```

ESC J *n*

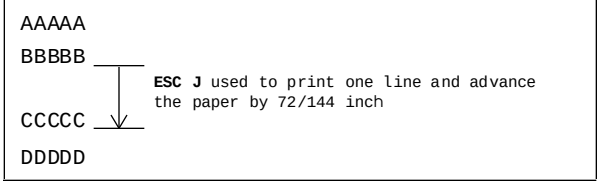
[Name]	Print and feed paper			
[Format]	ASCII	ESC	J	*n*
	Hex	1B	4A	*n*
	Decimal	27	74	*n*
[Range]	$0 \le n \le 255$			

ESC J ***n*** prints the data in the print buffer and feeds the paper [***n*** × (vertical or horizontal motion unit)] inches. This command is used to temporarily feed a specific length without changing the line spacing set by other commands. The maximum paper feed amount is 40 inches. When standard mode is selected, the vertical motion unit set by **GS P** is used. When page mode is selected, the vertical or horizontal motion unit set by **GS P** is used for the print direction set by **ESC T**.

Program Example

```
PRINT #1, CHR$(&H1D);"P";CHR$(160);CHR$(144);
PRINT #1, "AAAAA"; CHR$(&HA);
PRINT #1, "BBBBB"; CHR$(&H1B);"J";CHR$(72);
PRINT #1, "CCCCC"; CHR$(&HA);
PRINT #1, "DDDDD"; CHR$(&HA);
```

Print Sample



ESC d *n*

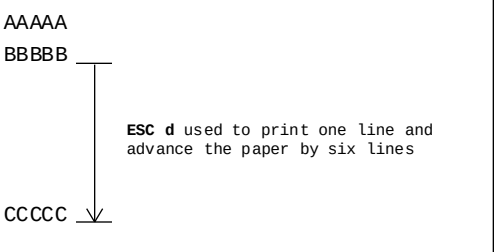
[Name]	Print and feed ***n*** lines			
[Format]	ASCII	ESC	d	*n*
	Hex	1B	64	*n*
	Decimal	27	100	*n*
[Range]	$0 \le n \le 255$			

ESC d ***n*** prints the data in the print buffer and feeds ***n*** lines. The amount of paper fed per line is based on the value set using the line spacing command. The maximum paper feed amount is 40 inches. The default setting of the paper feed amount is 1/6 inch.

Program Example

```
PRINT #1, "AAAAA"; CHR$(&HA);
PRINT #1, "BBBBB"; CHR$(&H1B);"d";CHR$(6);
PRINT #1, "CCCCC"; CHR$(&HA);
```

Print Sample



Line Spacing Commands

The TM-U375/U375P supports the following commands for setting line spacing. These commands only set the line spacing; they do not actually advance the paper. The line spacing can be set independently in standard mode and in page mode. The line spacing set using these commands effects the results of the **LF** and **ESC d** commands. The paper is advanced using the PAPER FEED button.

Command	Name
ESC 2	Select default line spacing
ESC 3	Set line spacing
ESC C	Set cut sheet eject length

ESC 2

[Name]	Select default line spacing		
[Format]	ASCII	ESC	2
	Hex	1B	32
	Decimal	27	50

ESC 3 *n*

[Name]	Set line spacing			
[Format]	ASCII	ESC	3	*n*
	Hex	1B	33	*n*
	Decimal	27	51	*n*
[Range]	$0 \le n \le 255$			

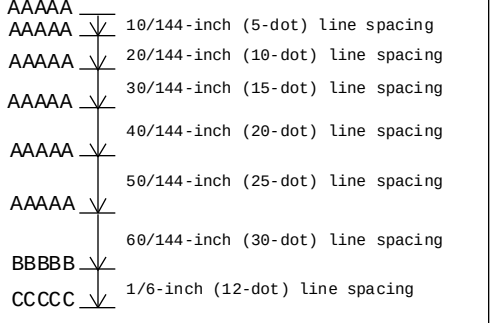
ESC 2 sets the line spacing to 1/6 inch. This is equivalent to 12 dots.

ESC 3 *n* sets the line spacing to [***n*** × (vertical or horizontal motion unit)] inches. The default setting of the paper feed amount is 1/6 inch (***n***=24). The maximum line spacing amount is 40 inches. When standard mode is selected, the vertical motion unit set by **GS P** is used. When page mode is selected, the vertical or horizontal motion unit set by **GS P** is used for the print direction set by **ESC T**.

Program Example

```
PRINT #1, CHR$(&H1D);"P";CHR$(160);CHR$(144);
PRINT #1, CHR$(&H1B);"c1";CHR$(1);← Select paper roll
FOR n=10 TO 60 STEP 10
    PRINT #1, CHR$(&H1B);"3";CHR$(n);
    PRINT #1, "AAAAA"; CHR$(&HA);
NEXT n
PRINT #1, CHR$(&H1B);"2";
PRINT #1, "BBBBB"; CHR$(&HA);
PRINT #1, "CCCCC"; CHR$(&HA);
```

Print Sample



ESC C *n*

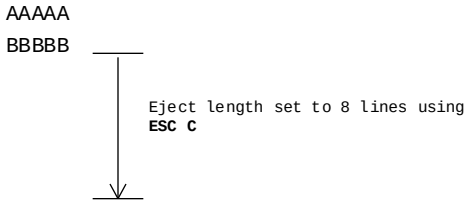
[Name]	Set cut sheet eject length			
[Format]	ASCII	ESC	C	*n*
	Hex	1B	43	*n*
	Decimal	27	67	*n*
[Range]	$0 \le n \le 255$			

ESC C *n* sets the eject length for cut sheet (slip or validation paper) to ***n*** lines. The maximum eject length is 40 inches. The default setting for the eject length is ***n***=0. This length is calculated by [***n*** × line spacing setting]. No eject length is set if ***n***=0. When ***n***=0, the paper is ejected continuously until it is completely out of the printer. The eject length set by this command is used by the **FF** command. This command sets the eject length for the paper specified by **ESC c 1**.

Program Example

```
PRINT #1, CHR$(&H1B);"c1";CHR$(4);←Select slip
PRINT #1, CHR$(&H1B);"C";CHR$(8);←Set eject length
PRINT #1, CHR$(&H1B);"c0";CHR$(4);←Select slip
PRINT #1, "AAAAA"; CHR$(&HA);
PRINT #1, "BBBBB"; CHR$(&HC);
```

Print Sample



Character Commands

The TM-U375/U375P supports the following commands for setting character font and size:

Command	Name
ESC SP	Set right-side character spacing
ESC %	Select/cancel user-defined character set
ESC &	Define user-defined characters
ESC ?	Cancel user-defined characters
ESC R	Select an international character set
ESC t	Select character code table
ESC !	Select print mode(s)
ESC –	Turn underline mode on/off
ESC E	Turn emphasized mode on/off
ESC G	Turn double-strike mode on/off
ESC {	Turn upside-down printing mode on/off
ESC V	Turn 90° clockwise rotation mode on/off
CAN	Cancel print data in page mode

ESC SP *n*

[Name] Set right-side character spacing

[Format]				
	ASCII	ESC	SP	*n*
	Hex	1B	20	*n*
	Decimal	27	32	*n*

[Range] $0 \le n \le 255$

ESC SP *n* sets the right-side character spacing to [***n*** × (horizontal or vertical motion unit)] inches. It is used to change the spacing between characters. The default setting is ***n***=0. When standard mode is selected, the horizontal motion unit set by **GS P** is used. When page mode is selected, the vertical or horizontal motion unit set by **GS P** is used for the print direction set by **ESC T**.

The right-side character spacing can be set independently in standard mode and in page mode.

Program Example

```
PRINT #1, CHR$(&H1D);"P";CHR$(160);CHR$(144);
PRINT #1, CHR$(&H1B);" ";CHR$(0);← Character spacing set to 0
PRINT #1, "AAAAA"; CHR$(&HA);
PRINT #1, CHR$(&H1B);" ";CHR$(6);← Character spacing set to 6
PRINT #1, "BBBBB"; CHR$(&HA);
PRINT #1, CHR$(&H1B);" ";CHR$(12);← Character spacing set to 12
PRINT #1, "CCCCC"; CHR$(&HA);
```

Print Sample

```
AAAAA ← 0-inch right-side character spacing
BBBBB ← 6/160-inch right-side character spacing
C C C C C  ← 12/160-inch right-side character spacing
```

ESC % *n*

[Name]	Select/cancel user-defined character set			
[Format]	ASCII	ESC	%	*n*
	Hex	1B	25	*n*
	Decimal	27	37	*n*
[Range]	$0 \le n \le 255$			

ESC & *y c1 c2 [x1 d1 ... d(y × x1)] ... [xk d1 ... d(y × xk)]*

[Name]	Define user-defined characters				
[Format]	ASCII	ESC	&	*y*	*c1 c2 [x1 d1 ... d(y × x1)] ... [xk d1 ... d(y × xk)]*
	Hex	1B	26	*y*	*c1 c2 [x1 d1 ... d(y × x1)] ... [xk d1 ... d(y × xk)]*
	Decimal	27	38	*y*	*c1 c2 [x1 d1 ... d(y × x1)] ... [xk d1 ... d(y × xk)]*
[Range]	$y = 2$				
	$32 \le c1 \le c2 \le 126$				
	$0 \le x \le 6$ (5 × 9 font)				
	$0 \le x \le 10$ (7 × 9 font)				
	$0 \le d1 \ldots d(y \times xk) \le 255$				
	$k = c2\text{-}c1+1$				

ESC ? *n*

[Name]	Cancel user-defined characters			
[Format]	ASCII	ESC	?	*n*
	Hex	1B	3F	*n*
	Decimal	27	63	*n*
[Range]	$32 \le n \le 126$			

ESC % *n* selects or cancels the user-defined character set. When the LSB (least significant bit) of ***n*** is 1, the user-defined character set is selected. When it is 0, the internal character set is selected; this is the default setting.

ESC & *y c1 c2 [x1 d1 ... d(y × x1)] ... [xk d1 ... d(y × xk)]* defines user-defined characters from character code ***c1*** to ***c2***. ***y*** and ***x*** are the configuration of a user-defined character. ***y*** specifies the number of bytes in the vertical direction. ***x*** specifies the number of dots in the horizontal direction. Character codes from the alphanumeric characters (20H (decimal 32) to 7EH (decimal 126)) can be defined by ***c1*** and ***c2***. Data (***d***) specifies a bit printed to 1 and not printed to 0. As the default, user-defined characters are not defined and the internal character set is printed. Once the user-defined characters have been defined, they are available until **ESC @**, **ESC ?**, or **GS *** is executed; the user-defined characters are redefined; the power is turned off; or the printer is reset. When this command is executed, the downloaded bit image is canceled.

ESC ? *n* cancels the user-defined characters defined for the character code ***n***. After the user-defined characters are canceled, the internal character set is printed.

Program Example

```
y=2
PRINT #1, CHR$(&H1B);"&";CHR$(y);"AC";
x=7: PRINT #1, CHR$(x);
FOR i=1 TO y*x
  READ d: PRINT #1, CHR$(d);
NEXT i
x=9: PRINT #1, CHR$(x);
FOR i=1 TO y*x
  READ d: PRINT #1, CHR$(d);
NEXT i
x=9: PRINT #1, CHR$(x);
FOR i=1 TO y*x
  READ d: PRINT #1, CHR$(d);
NEXT i

PRINT #1, CHR$(&H1B);"%";CHR$(0); ← Select the internal character set
PRINT #1, "A B C D E"; CHR$(&HA);
PRINT #1, CHR$(&H1B);"%";CHR$(1); ← Select the user-defined character set
PRINT #1, "A B C D E"; CHR$(&HA):
PRINT #1, CHR$(&H1B);"?";"A"; ← Cancel the user-defined character
PRINT #1, "A B C D E"; CHR$(&HA);
```

Defines the user-defined characters as "A", "B", and "C"

Program Example (continued)

```
DATA &H30,&H00,&H78,&H00,&HFC,&H00,&H78,&H00
DATA &H30,&H00,&H00,&H00,&H00,&H00
DATA &H18,&H00,&H24,&H00,&H42,&H00,&H81,&H00
DATA &H42,&H00,&H24,&H00,$H18,&H00,&H00,&H00
DATA &H00,&H00
DATA &H18,&H00,&H28,&H00,&H4F,&H80,&H80,&H80
DATA &H4F,&H80,&H28,&H00,&H18,&H00,&H00,&H00
DATA &H00,&H00
```

Print Sample

```
A B C D E  ← Characters from internal character set
+◊↑D E     ← Characters from user-defined character set
A◊↑D E     ← Characters from user-defined character set
             (cancel one character)
```

ESC R *n*

[Name] Select an international character set

[Format]				
	ASCII	ESC	R	*n*
	Hex	1B	52	*n*
	Decimal	27	82	*n*

[Range] $0 \le n \le 10$

ESC R *n* selects an international character set ***n*** as follows. The default value is U.S.A. (***n***=0).

n	Country
0	U.S.A.
1	France
2	Germany
3	U.K.
4	Denmark I
5	Sweden
6	Italy
7	Spain
8	Japan
9	Norway
10	Denmark II

Program Example

```
FOR n=0 TO 10
 PRINT #1, CHR$(&H1B);"R";CHR$(n);
 PRINT #1, "# $@[ \ ] ^ ` { ¦ } ~"; CHR$(&HA);
NEXT n
```

Print Sample

```
#  $  @  [  \  ]  ^  `  {  ¦  }  ~   ← n=0 (Default setting)
#  $  à  °  ç  §  ^  `  é  ù  è  ¨   ← n=1
#  $  §  Ä  Ö  Ü  ^  `  ä  ö  ü  ß   ← n=2
£  $  @  [  \  ]  ^  `  {  ¦  }  ~   ← n=3
#  $  @  Æ  Ø  Å  ^  `  æ  ø  å  ~   ← n=4
#  ¤  É  Ä  Ö  Å  Ü  é  ä  ö  å  ü   ← n=5
#  $  @  °  \  é  ^  ù  à  ò  è  ì   ← n=6
Pt $  @  ¡  Ñ  ¿  ^  `  ¨  ñ  }  ~   ← n=7
#  $  @  [  ¥  ]  ^  `  {  ¦  }  ~   ← n=8
#  ¤  É  Æ  Ø  Å  Ü  é  æ  ø  å  ü   ← n=9
#  $  É  Æ  Ø  Å  Ü  é  æ  ø  å  ü   ← n=10
```

ESC t *n*

[Name] Select character code table

[Format]	ASCII	ESC	t	*n*
	Hex	1B	74	*n*
	Decimal	27	116	*n*
[Range]	$0 \le n \le 5$			
	$254 \le n \le 255$			

ESC t *n* selects a page ***n*** from the character code table as follows. The alphanumeric characters (20H (decimal 32) to 7FH (decimal 127)) are the same for each page. The graphic characters (80H (decimal 128) to FFH (decimal 255)) are different for each page. The default setting is page 0.

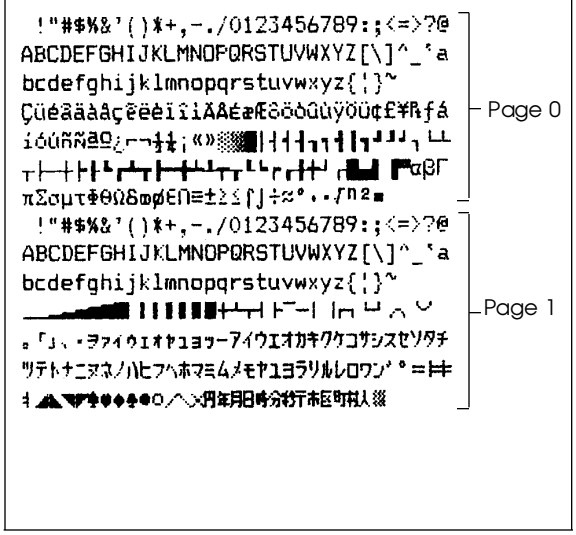
n	Character Code Table
0	Page 0 (PC437 (U.S.A. , Standard Europe))
1	Page 1 (Katakana)
2	Page 2 (PC850 (Multilingual))
3	Page 3 (PC860 (Portuguese))
4	Page 4 (PC863 (Canadian-French))
5	Page 5 (PC865 (Nordic))
254	Page 254 (space page)
255	Page 255 (space page)

Program Example

```
PRINT #1, CHR$(&H1B);"!";CHR$(0);
PRINT #1, CHR$(&H1B);"t";CHR$(0); ← Select page 0
GOSUB printing
PRINT #1, CHR$(&H1B);"t";CHR$(1); ← Select page 1
GOSUB printing
END

printing:
  FOR i=&H20 TO &H7F
    PRINT #1, CHR$(i);
  NEXT i
  PRINT #1, CHR$(&HA);
  FOR i=&H80 TO &HFF
    PRINT #1, CHR$(i);
  NEXT i
  PRINT #1, CHR$(&HA);
  RETURN
```

Print Sample



ESC ! *n*

[Name] Select print mode(s)

[Format]	ASCII	ESC	!	*n*
	Hex	1B	21	*n*
	Decimal	27	33	*n*

[Range] $0 \le n \le 255$

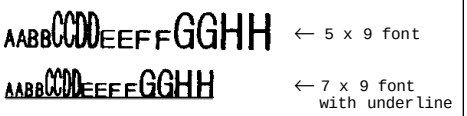
ESC ! *n* selects print modes using ***n*** as follows. The default setting is ***n***=1. This command cannot be used with the 7 × 9 font or for emphasized printing in page mode. If the 7 × 9 font or emphasized printing is selected or canceled in page mode, an internal flag is activated and this command is enabled when the printer returns to standard mode.

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Character font 5 x 9 selected.
	On	01	1	Character font 7 x 9 selected.
1, 2	—	—	—	Undefined.
3	Off	00	0	Emphasized mode not selected.
	On	08	8	Emphasized mode selected.
4	Off	00	0	Double-height mode not selected.
	On	10	16	Double-height mode selected.
5	Off	00	0	Double-width mode not selected.
	On	20	32	Double-width mode selected.
6	–	–	–	Undefined.
7	Off	00	0	Underline mode not selected.
	On	80	128	Underline mode selected.

Program Example

```
PRINT #1, CHR$(&H1B);"!";CHR$(0); "AA";
PRINT #1, CHR$(&H1B);"!";CHR$(8); "BB";
PRINT #1, CHR$(&H1B);"!";CHR$(16); "CC";
PRINT #1, CHR$(&H1B);"!";CHR$(24); "DD";
PRINT #1, CHR$(&H1B);"!";CHR$(32); "EE";
PRINT #1, CHR$(&H1B);"!";CHR$(40); "FF";
PRINT #1, CHR$(&H1B);"!";CHR$(48); "GG";
PRINT #1, CHR$(&H1B);"!";CHR$(56); "HH"; CHR$(&HA);
PRINT #1, CHR$(&H1B);"!";CHR$(129); "AA";
PRINT #1, CHR$(&H1B);"!";CHR$(137); "BB";
PRINT #1, CHR$(&H1B);"!";CHR$(145); "CC";
PRINT #1, CHR$(&H1B);"!";CHR$(153); "DD";
PRINT #1, CHR$(&H1B);"!";CHR$(161); "EE";
PRINT #1, CHR$(&H1B);"!";CHR$(169); "FF";
PRINT #1, CHR$(&H1B);"!";CHR$(177); "GG";
PRINT #1, CHR$(&H1B);"!";CHR$(185); "HH"; CHR$(&HA);
```

Print Sample




```
AA: Normal
BB: Emphasized
CC: Double-height
DD: Emphasized + Double-height
EE: Double-width
FF: Emphasized + Double-width
GG: Double-height + Double-width
HH: Emphasized + Double-height + Double-width
```

ESC – *n*

[Name] Turn underline mode on/off

[Format]	ASCII	ESC	–	*n*
	Hex	1B	2D	*n*
	Decimal	27	45	*n*

[Range] *n* = 0, 1, 48, 49

ESC – *n* turns underline mode on or off. When ***n***=1 or 49, underline mode is turned on, and when ***n***=0 or 48, underline mode is turned off. When underline mode is on, 90° clockwise rotated characters cannot be underlined. The default setting is ***n***=0.

Program Example

```
PRINT #1, CHR$(&H1B);"-";CHR$(1); ← Select
PRINT #1, "AAAAA";CHR$(&HA);
PRINT #1, CHR$(&H1B);"-";CHR$(0); ← Cancel
PRINT #1, "BBBBB";CHR$(&HA);
```

Print Sample

AAAAA ← Underline mode turned on
BBBBB ← Underline mode turned off

ESC E *n*

[Name] Turn emphasized mode on/off

[Format]	ASCII	ESC	E	*n*
	Hex	1B	45	*n*
	Decimal	27	69	*n*

[Range] $0 \le n \le 255$

ESC E *n* turns emphasized mode on or off. When the LSB (least significant bit) of ***n*** is 1, emphasized mode is turned on; when it is 0, emphasized mode is turned off. The default setting is ***n***=0. Emphasized and double-strike printing appear the same. This command is enabled only in standard mode. If this command is entered in page mode, an internal flag is activated and the command is enabled when the printer returns to standard mode.

Program Example

```
PRINT #1, CHR$(&H1B);"E";CHR$(1); ← Select
PRINT #1, "AAAAA"; CHR$(&HA);
PRINT #1, CHR$(&H1B);"E"; CHR$(0); ← Cancel
PRINT #1, "BBBBB"; CHR$(&HA);
```

Print Sample

AAAAA ← Emphasized mode turned on
BBBBB ← Emphasized mode turned off

ESC G *n*

[Name] Turn double-strike mode on/off

[Format]	ASCII	ESC	G	*n*
	Hex	1B	47	*n*
	Decimal	27	71	*n*

[Range] $0 \le n \le 255$

ESC G *n* turns double-strike mode on or off. When the LSB (least significant bit) of ***n*** is 1, double-strike mode is turned on; when it is 0, double-strike mode is turned off. The default setting is ***n***=0. Double-strike and emphasized printing appear the same. This command is enabled only in standard mode. If this command is entered in page mode, an internal flag is activated and the command is enabled when the printer returns to standard mode.

Program Example

```
PRINT #1, CHR$(&H1B);"G";CHR$(1); ← Select
PRINT #1, "AAAAA"; CHR$(&HA);
PRINT #1, CHR$(&H1B);"G";CHR$(0); ← Cancel
PRINT #1, "BBBBB"; CHR$(&HA);
```

Print Sample

AAAAA ← Double-strike mode turned on
BBBBB ← Double-strike mode turned off

ESC { *n*

[Name] Turn upside-down printing mode on/off

[Format]	ASCII	ESC	{	*n*
	Hex	1B	7B	*n*
	Decimal	27	123	*n*

[Range] $0 \le n \le 255$

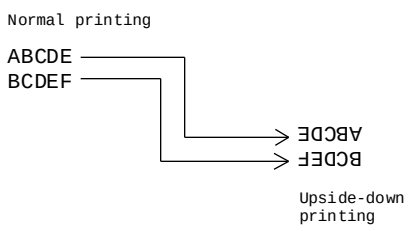
ESC { *n* turns upside-down printing mode on or off. When the LSB (least significant bit) of ***n*** is 1, upside-down printing mode is turned on; when it is 0, upside-down printing mode is turned off. The default setting is ***n***=0. When upside-down mode is turned on, the printer prints 180°-rotated characters from right to left. The line printing order is not reversed; therefore be careful of the order of the data transmitted. In standard mode, this command is enabled only when input at the beginning of a line. In page mode, the print direction is set with **ESC T**, an internal flag is activated, and this command is enabled when the printer returns to standard mode.

Program Example

```
PRINT #1, CHR$(&H1B);"{";CHR$(0); ← Cancel
GOSUB printing
PRINT #1, CHR$(&H1B);"{";CHR$(1); ← Select
GOSUB printing
END

printing:
  PRINT #1, "ABCDE"; CHR$(&HA);
  PRINT #1, "BCDEF"; CHR$(&HA);
  RETURN
```

Print Sample



ESC V *n*

[Name] Turn 90° clockwise rotation mode on/off

[Format]	ASCII	ESC	V	*n*
	Hex	1B	56	*n*
	Decimal	27	86	*n*

[Range] $0 \le n \le 2$

$48 \le n \le 50$

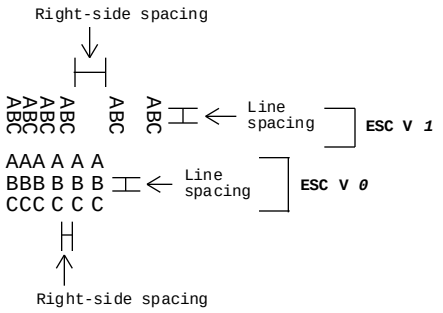
ESC V *n* turns 90° clockwise rotation mode on or off. When ***n***=1 or 49, 90° clockwise rotation mode (1-dot character spacing) is turned on; when ***n***=2 or 50, 90° clockwise rotation mode (1.5-dot character spacing) is turned on; and when ***n***=0 or 48, this mode is turned off. The default setting is ***n***=0. The characters do not rotate when both the 7 ×9 font and the 90° clockwise rotation mode are selected, because selecting the 7×9 font is higher priority. This command is enabled only in standard mode. If this command is entered in page mode, an internal flag is activated and the command is enabled when the printer returns to standard mode.

Program Example

```
PRINT #1, CHR$(&H1D);"P";CHR$(160);CHR$(144);
PRINT #1, CHR$(&H1B);"3";CHR$(10);
PRINT #1, CHR$(&H1B);"V";CHR$(1);← Select
GOSUB printing
PRINT #1, CHR$(&H1B);"2";
PRINT #1, CHR$(&H1B);"V";CHR$(0);← Cancel
GOSUB printing
END

printing:
  PRINT #1, CHR$(&H1B);" ";CHR$(0); "AAA";
  PRINT #1, CHR$(&H1B);" ";CHR$(10); "AAA";
  PRINT #1, CHR$(&HA);
  PRINT #1, CHR$(&H1B);" ";CHR$(0); "BBB"
  PRINT #1, CHR$(&H1B);" ";CHR$(10); "BBB";
  PRINT #1, CHR$(&HA);
  PRINT #1, CHR$(&H1B);" ";CHR$(0); "CCC";
  PRINT #1, CHR$(&H1B);" ";CHR$(10); "CCC";
  PRINT #1, CHR$(&HA); CHR$(&HA);
  RETURN
```

Print Sample



CAN

[Name] Cancel print data in page mode

[Format]	ASCII	CAN
	Hex	18
	Decimal	24

CAN deletes all the print data for the current print job in page mode. This command is enabled only in page mode.

Program Example

```
PRINT #1, CHR$(&H1B);"L";← Select page mode
PRINT #1, CHR$(&H1B);"W";CHR$(0);CHR$(0);CHR$(0);
CHR$(0);CHR$(120);CHR$(0);CHR$(100);CHR$(0);
PRINT #1, CHR$(&H1B);"T";CHR$(0);
FOR i=1 TO 200
  PRINT #1, "A";
NEXT i
PRINT #1, CHR$(&H1B);"W";CHR$(30);CHR$(0);CHR$(30);
CHR$(0);CHR$(30);CHR$(0);CHR$(30);CHR$(0);
PRINT #1, CHR$(&H18);← Cancel print data

PRINT #1, CHR$(&HC);← Batch print
```

Print Sample

```
AAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAA
AAAAA      AAAAAAAAAA
AAAAA      AAAAAAAAAA
AAAAA      AAAAAAAAAA
AAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAA
```

Panel Button Command

The TM-U375/U375P supports the following command for enabling and disabling the panel buttons (PAPER FEED and RELEASE):

Command	Name
ESC c 5	Enable/disable panel buttons

ESC c 5 *n*

[Name]	Enable/disable panel buttons				
[Format]	ASCII	ESC	c	5	*n*
	Hex	1B	63	35	*n*
	Decimal	27	99	53	*n*
[Range]	$0 \le n \le 255$				

ESC c 5 *n* enables or disables the PAPER FEED and RELEASE buttons. When the LSB (least significant bit) of ***n*** is 1, these buttons are disabled; when it is 0, these buttons are enabled. The default setting is ***n***=0. To prevent problems caused by accidentally pressing the buttons, use this command to disable them. When the printer cover is open, the PAPER FEED button is disabled and the RELEASE button is enabled, regardless of the setting of this command.

Program Example

```
PRINT #1, CHR$(&H1B);"c5";CHR$(1); ← Disable panel buttons
```

Paper Sensor Commands

The TM-U375/U375P supports the following commands for controlling the paper sensor(s) that stop printing and output paper-end signals:

Command	Name
ESC c 4	Select paper sensor(s) to stop printing
ESC c 3	Select paper sensor(s) to output paper-end signals

ESC c 4 *n*

[Name] Select paper sensor(s) to stop printing

[Format]					
	ASCII	ESC	c	4	*n*
	Hex	1B	63	34	*n*
	Decimal	27	99	52	*n*

[Range] $0 \le n \le 255$

ESC c 4 *n* selects the paper sensor that stops printing when the paper runs out. The default setting is ***n***=0 (all paper sensors disabled).

If either bit 0 or 1 is 1, the paper roll near-end sensor is enabled to stop printing.

When a paper sensor is enabled with this command, printing stops only when the corresponding paper is selected for printing. It is possible to select multiple sensors to stop printing. Then if any of the selected sensors detects a paper-end or near-end, printing stops.

When the paper roll near-end sensor detects a near-end, printing stops after printing the current line and feeding the paper.

When DIP switch 2-3 is off and the paper roll near-end sensor detects a paper near-end, the printer goes off-line after printing stops.

When the slip or validation ejection sensor detects a paper-end, the printer ejects the paper after printing and then enters the paper waiting state.

The paper sensor(s) used to stop printing are selected by using ***n*** as follows:

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Paper roll near-end sensor disabled.
	On	01	1	Paper roll near-end sensor enabled.
1	Off	00	0	Paper roll near-end sensor disabled.
	On	02	2	Paper roll near-end sensor enabled.
2-4	-	-	-	Undefined.
5	Off	00	0	Slip ejection sensor disabled.
	On	20	32	Slip ejection sensor enabled.

Bit	Off/On	Hex	Decimal	Function
6	-	-	-	Undefined.
7	Off	00	0	Validation ejection sensor disabled.
	On	80	128	Validation ejection sensor enabled.

Program Example

```
PRINT #1, CHR$(&H1B);"c4";CHR$(1); ← Paper roll near-end sensor enabled
```

ESC c 3 *n*

[Name] Select paper sensor(s) to output paper-end signals

[Format]	ASCII	ESC	c	3	*n*
	Hex	1B	63	33	*n*
	Decimal	27	99	51	*n*

[Range] $0 \le n \le 255$

ESC c 3 *n* selects paper sensor(s) to output paper-end signals to a parallel interface. The default value is to enable the paper roll near-end sensor (***n***=3).

If either bit 0 or bit 1 is 1, the paper roll near-end sensor is selected as a paper-end sensor that is enabled to output a paper-end signal.

If any of bits 4-7 are 1, the cut-sheet (slip or validation paper) sensor is selected as a paper-end sensor that is enabled to output a paper-end signal.

When both of these sensors are selected to output signals and either one detects a paper-end, the paper-end signal is output. This command is enabled only with a parallel interface and is ignored with a serial interface.

The paper sensor(s) used to output paper-end signals are selected by using ***n*** as follows:

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Paper roll near-end sensor disabled.
	On	01	1	Paper roll near-end sensor enabled.
1	Off	00	0	Paper roll near-end sensor disabled.
	On	02	2	Paper roll near-end sensor enabled.
2-3	-	-	-	Undefined.
4	Off	00	0	Cut-sheet (slip or validation) sensor disabled.
	On	10	16	Cut-sheet (slip or validation) sensor enabled.
5	Off	00	0	Cut-sheet (slip or validation) sensor disabled.
	On	20	32	Cut-sheet (slip or validation) sensor enabled.

Bit	Off/On	Hex	Decimal	Function
6	Off	00	0	Cut-sheet (slip or validation) sensor disabled.
	On	40	64	Cut-sheet (slip or validation) sensor enabled.
7	Off	00	0	Cut-sheet (slip or validation) sensor disabled.
	On	80	128	Cut-sheet (slip or validation) sensor enabled.

Program Example

```
PRINT #1, CHR$(&H1B);"c3";CHR$(17); ← Both sensors enabled
```

Printing Paper Commands

The TM-U375/U375P supports the following commands for controlling printing paper:

Command	Name
ESC c 0	Select paper type(s) for printing
ESC c 1	Select paper type(s) for command settings
ESC f	Set cut sheet wait time

ESC c 0 *n*

[Name] Select paper type(s) for printing

[Format]					
	ASCII	ESC	c	0	*n*
	Hex	1B	63	30	*n*
	Decimal	27	99	48	*n*

[Range] $1 \le n \le 11$

ESC c 0 *n* selects paper type(s) for printing. The paper roll, slip, and validation paper are available. The paper roll and slip or validation paper can be selected simultaneously. Slip and validation paper cannot be selected simultaneously. When previously disabled slip or validation paper is enabled, the printer waits for the slip or validation paper to be inserted. When previously enabled slip or validation paper is disabled, the printer ejects the paper. The paper roll is enabled by the default value (***n***=1). If either bit 0 or 1 is 1, the paper roll is selected.

When the paper roll and slip or validation paper are selected simultaneously, the paper roll must contain pressure-sensitive paper or the image will not be printed.

This command is enabled only when input at the beginning of a line in standard mode. This command is not valid in page mode.

The paper type(s) are selected for printing by using ***n*** as follows:

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Paper roll disabled.
	On	01	1	Paper roll enabled.
1	Off	00	0	Paper roll disabled.
	On	02	2	Paper roll enabled.
2	Off	00	0	Slip paper disabled.
	On	04	4	Slip paper enabled.
3	Off	00	0	Validation paper disabled.
	On	08	8	Validation paper enabled.
4 - 7	—	—	—	Undefined.

Program Example

```
PRINT #1, CHR$(&H1B);"c0";CHR$(4); ← Select slip
PRINT #1, "AAAAA"; CHR$(&HA); ← Print on slip
PRINT #1, CHR$(&H1B);"c0";CHR$(1); ← Select paper roll
PRINT #1, "BBBBB"; CHR$(&HA); ← Print on paper roll
```

ESC c 1 *n*

[Name] Select paper type(s) for command settings

[Format]					
	ASCII	ESC	c	1	*n*
	Hex	1B	63	31	*n*
	Decimal	27	99	49	*n*

[Range] $1 \le n \le 15$

ESC c 1 *n* selects paper type(s) for use with various command settings. The paper roll, slip, and validation paper are available. Multiple paper types can be selected. The default is all paper types selected (***n***=15). If either bit 0 or 1 is 1, the paper roll is selected.

The paper types selected can be used with these commands: **ESC 2**, **ESC 3**, **ESC C**, **GS L**, and **GS W**.

The value of ***n*** is used as follows:

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Paper roll disabled.
	On	01	1	Paper roll enabled.
1	Off	00	0	Paper roll disabled.
	On	02	2	Paper roll enabled.
2	Off	00	0	Slip paper disabled.
	On	04	4	Slip paper enabled.

Bit	Off/On	Hex	Decimal	Function
3	Off	00	0	Validation paper disabled.
	On	08	8	Validation paper enabled.
4-7	—	—	—	Undefined.

Program Example

```
PRINT #1, CHR$(&H1B);"c1";CHR$(1); ← Select paper roll
PRINT #1, CHR$(&H1B);"3";CHR$(12); ← Set line spacing for paper roll
PRINT #1, CHR$(&H1B);"c1";CHR$(4); ← Select slip paper
PRINT #1, CHR$(&H1B);"3";CHR$(24); ← Set line spacing for slip paper
```

ESC f *t1 t2*

[Name] Set cut sheet wait time

[Format]	ASCII	ESC	f	*t1*	*t2*
	Hex	1B	66	*t1*	*t2*
	Decimal	27	102	*t1*	*t2*

[Range] $0 \le t1 \le 15$

$0 \le t2 \le 64$

ESC f *t1 t2* sets the time that the printer waits for cut sheet (slip or validation paper) to be inserted to ***t1*** × 1 minutes, and the time from insertion of the sheet to the start of printing to ***t2*** × 0.1 seconds. When ***t1***=0, the sheet waiting time is not set and the printer continues waiting for a sheet to be inserted. The default for the sheet waiting time is not set, and the start operation time is set to 1 second (***t1***=0, ***t2***=10). This setting alone, however, does not cause the printer to immediately start waiting for a sheet to be inserted. The setting becomes effective when **ESC c 0** is used. **DLE ENQ** is used to cancel the sheet waiting state.

Program Example

```
PRINT #1, CHR$(&H1B);"f";CHR$(15);CHR$(20);
PRINT #1, CHR$(&H1B);"c0";CHR$(4); ← Select slip
PRINT #1, "AAAAA"; CHR$(&HA);
```

Print Position Commands

The TM-U375/U375P supports the following commands for setting the print position:

Command	Name
ESC $	Set absolute print position
**ESC **	Set relative print position
ESC a	Select justification
GS L	Set left margin
GS W	Set printing area width
HT	Horizontal tab
ESC D	Set horizontal tab positions
ESC W	Set printing area in page mode
ESC T	Select print direction in page mode

ESC $ *nL nH*

[Name]	Set absolute print position				
[Format]	ASCII	ESC	$	*nL*	*nH*
	Hex	1B	24	*nL*	*nH*
	Decimal	27	36	*nL*	*nH*
[Range]	$0 \le n_L \le 255$				
	$0 \le n_H \le 255$				

ESC \ *nL nH*

[Name]	Set relative print position				
[Format}	ASCII	ESC	\	*nL*	*nH*
	Hex	1B	5C	*nL*	*nH*
	Decimal	27	92	*nL*	*nH*
[Range]	$0 \le n_L \le 255$				
	$0 \le n_H \le 255$				

ESC $ n_L n_H sets the print starting position to [(n_L + n_H × 256) × (horizontal or vertical motion unit)] inches from the left margin.

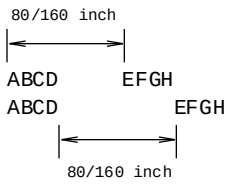
**ESC ** n_L n_H moves the print starting position to [(n_L + n_H × 256) × (horizontal or vertical motion unit)] inches from the current position. Use the complement of N for setting N pitch movement to the left: – N pitch = 65536 – N, where N = (n_L + n_H × 256).

When standard mode is selected, the horizontal motion unit set by **GS P** is used. When page mode is selected, the horizontal or vertical motion unit set by **GS P** is used for the print direction set by **ESC T**.

Program Example

```
PRINT #1, CHR$(&H1D);"P";CHR$(160);CHR$(144);
PRINT #1, "ABCD";
PRINT #1, CHR$(&H1B);"$";CHR$(80);CHR$(0);
PRINT #1, "EFGH"; CHR$(&HA);
PRINT #1, "ABCD";
PRINT #1, CHR$(&H1B);CHR$(&H5C);CHR$(80);CHR$(0);
PRINT #1, "EFGH"; CHR$(&HA);
```

Print Sample



ESC a n

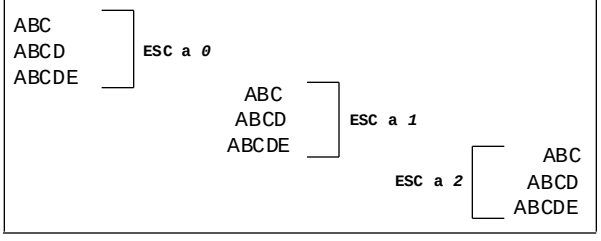
[Name]	Select justification			
[Format]	ASCII	ESC	a	n
	Hex	1B	61	n
	Decimal	27	97	n
[Range]	$0 \le n \le 2$			
	$48 \le n \le 50$			

ESC a n aligns all the data in one line to a specified position. Left justification is selected when n=0 or 48, centering is selected when n=1 or 49, and right justification is selected when n=2 or 50. The default setting is left justification (n=0). This command is enabled only at the beginning of a line in standard mode. If this command is entered in page mode, an internal flag is activated and the command is enabled when the printer returns to standard mode.

Program Example

```
FOR n=0 TO 2
  PRINT #1, CHR$(&H1B);"a";CHR$(n);
  PRINT #1, "ABC"; CHR$(&HA);
  PRINT #1, "ABCD"; CHR$(&HA);
  PRINT #1, "ABCDE"; CHR$(&HA);
NEXT n
```

Print Sample



GS L n_L n_H

[Name]	Set left margin				
[Format]	ASCII	GS	L	n_L	n_H
	Hex	1D	4C	n_L	n_H
	Decimal	29	76	n_L	n_H
[Range]	$0 \le n_L \le 255$				
	$0 \le n_H \le 255$				

GS W n_L n_H

[Name]	Set printing area width				
[Format]	ASCII	GS	W	n_L	n_H
	Hex	1D	57	n_L	n_H
	Decimal	29	87	n_L	n_H
[Range]	$0 \le n_L \le 255$				
	$0 \le n_H \le 255$				

GS L n_L n_H sets the left margin to $[(n_L + n_H \times 256) \times$ (horizontal motion unit)] inches from the beginning of a line. The default setting is n_L=0, n_H=0. This command is enabled only at the beginning of a line in standard mode. If this command is entered in page mode, an internal flag is activated and the command is enabled when the printer returns to standard mode.

GS W n_L n_H sets the printing area width to $[(n_L + n_H \times 256) \times$ (horizontal motion unit)] inches. The default setting is n_L=144, n_H=1. This command is enabled only at the beginning of a line in standard mode. If this command is entered in page mode, an internal flag is activated and the command is enabled when the printer returns to standard mode.

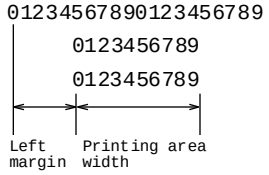
If the above commands set the printing area width to less than the width of one character, the printing area width is extended to accommodate one character for the line.

The horizontal motion units use the horizontal value set by the **GS P** command. The default setting is 1/160 inch.

Program Example

```
PRINT #1, CHR$(&H1D);"P";CHR$(160);CHR$(144);
PRINT #1, CHR$(&H1B);:c0:;CHR$(1);←Select paper roll
PRINT #1, "01234567890123456789"; CHR$(&HA);
PRINT #1, CHR$(&H1B);"c1";CHR$(1);←Select paper roll
PRINT #1, CHR$(&H1D);"L";CHR$(60);CHR$(0);
PRINT #1, CHR$(&H1D);"W";CHR$(120);CHR$(0);
PRINT #1, "01234567890123456789"; CHR$(&HA);
```

Print Sample



HT

[Name]	Horizontal tab	
[Format]	ASCII	HT
	Hex	09
	Decimal	9

ESC D *n1 ... nk NUL*

[Name]	Set horizontal tab positions				
[Format]	ASCII	ESC	D	*n1 ... nk*	*NUL*
	Hex	1B	44	*n1 ... nk*	*00*
	Decimal	27	68	*n1 ... nk*	*0*
[Range]	$1 \le n \le 255$				
	$0 \le k \le 32$				

HT moves the print start position to the next horizontal tab. This command is ignored unless the next horizontal tab position has been set.

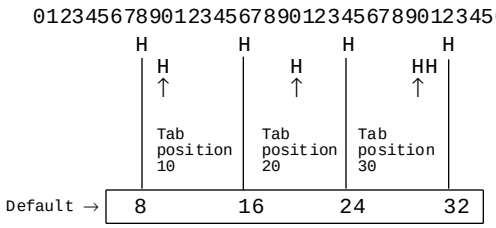
ESC D *n1 ... nk NUL* sets a horizontal tab to the left margin or ***n*** columns from the beginning of a line, with ***k*** indicating the total number of horizontal tab positions to be set. A maximum of 32 tab positions can be set. This command cancels any previous horizontal tab settings. The default tab positions are every eight characters for the 7×9 font.

Program Example

```
PRINT #1, "01234567890123456789012345678901234567890123456";
PRINT #1, CHR$(&HA);
GOSUB ht
PRINT #1, CHR$(&H1B);"D";CHR$(10);CHR$(20);
CHR$(30);CHR$(0);
GOSUB ht
END

ht:
  FOR i=1 TO 4
    PRINT #1, CHR$(&H9); "H";
  NEXT i
  PRINT #1, CHR$(&HA);
  RETURN
```

Print Sample



ESC W x_L x_H y_L y_H dx_L dx_H dy_L dy_H

[Name] Set printing area in page mode

[Format]				
	ASCII	ESC	W	x_L x_H y_L y_H dx_L dx_H dy_L dy_H
	Hex	1B	57	x_L x_H y_L y_H dx_L dx_H dy_L dy_H
	Decimal	27	87	x_L x_H y_L y_H dx_L dx_H dy_L dy_H

[Range] $0 \le x_L, x_H, y_L, y_H, dx_L, dx_H, dy_L, dy_H \le 255$
(except for $dx_L = dx_H = 0$ or $dy_L = dy_H = 0$)

ESC W x_L x_H y_L y_H dx_L dx_H dy_L dy_H sets the size and position of the printing area in page mode as follows:

Horizontal starting position = $[(x_L + x_H \times 256) \times$ (horizontal motion unit)] inches
Vertical starting position = $[(y_L + y_H \times 256) \times$ (vertical motion unit)] inches
Printing area width = $[(dx_L + dx_H \times 256) \times$ (horizontal motion unit)] inches
Printing area height = $[(dy + dy_H \times 256) \times$ (vertical motion unit)] inches

The default settings are as follows:

$x_L = x_H = y_L = y_H = 0$
$dx_L = 144$, $dx_H = 1$, $dy_L = 128$, $dy_H = 5$

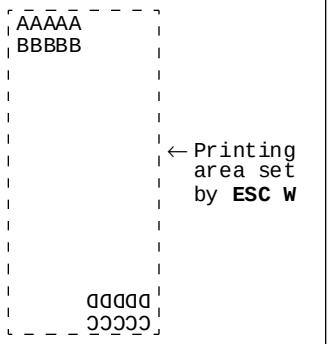
This command is enabled only in page mode. If this command is entered in standard mode, an internal flag is activated and the command is enabled when the printer selects page mode.

The horizontal and vertical motion units use the horizontal and vertical values set by the **GS P** command. The default settings of the horizontal and vertical motion units are 1/160 and 1/144 inches, respectively.

Program Example

```
PRINT #1, CHR$(&H1D);"P";CHR$(160);CHR$(144);
PRINT #1, CHR$(&H1B);"L";← Select page mode
PRINT #1, CHR$(&H1B);"W";CHR$(0);CHR$(0);CHR$(0);CHR$(0);CHR$(100);
CHR$(0);CHR$(4);CHR$(1);
PRINT #1, CHR$(&H1B);"T";CHR$(0);
PRINT #1, "AAAAA"; CHR$(&HA);← Store characters for printing
PRINT #1, "BBBBB"; CHR$(&HA);← Store characters for printing
PRINT #1, CHR$(&H1B);"T";CHR$(2);
PRINT #1, "CCCCC"; CHR$(&HA);← Store characters for printing
PRINT #1, "DDDDD"; CHR$(&HC);← Batch print
```

Print Sample



ESC T n

[Name] Select print direction in page mode

[Format]

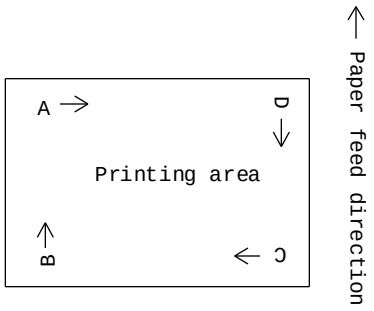
ASCII	ESC	T	*n*
Hex	1B	54	*n*
Decimal	27	84	*n*

[Range] $0 \le n \le 3$

$48 \le n \le 51$

ESC T *n* selects the print direction and starting position in page mode specified by ***n*** as shown below. The default setting is ***n***=0. This command is enabled only in page mode. If this command is entered in standard mode, an internal flag is activated and the command is enabled when the printer selects page mode.

n	Print Direction	Starting Position
0, 48	Left to right	Upper left (A in the figure)
1, 49	Bottom to top	Lower left (B in the figure)
2, 50	Right to left	Lower right (C in the figure)
3, 51	Top to bottom	Upper right (D in the figure)



The parameters for the horizontal or vertical motion units (***x*** or ***y***) differ depending on the starting position of the printing area as follows:

If the starting position is the upper left or lower right of the printing area (***n*** = 0, 2, 48, or 50):

- These commands use horizontal motion units: **ESC SP**, **ESC $**, **ESC W**, **ESC **
- These commands use vertical motion units: **ESC 3**, **ESC J**, **ESC W**

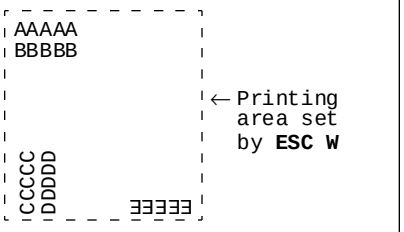
If the starting position is the upper right or lower left of the printing area (***n*** = 1, 3, 49, or 51):

- These commands use horizontal motion units: **ESC 3**, **ESC J**, **ESC W**
- These commands use vertical motion units: **ESC SP**, **ESC $**, **ESC W**, **ESC **

Program Example

```
PRINT #1, CHR$(&H1B);"L";← Select page mode
PRINT #1, CHR$(&H1B);"W";CHR$(0);CHR$(0);CHR$(0);CHR$(0);
CHR$(100);CHR$(0);CHR$(100);CHR$(0);
PRINT #1, CHR$(&H1B);"T";CHR$(0);
PRINT #1, "AAAAA"; CHR$(&HA);← Store characters for printing
PRINT #1, "BBBBB"; CHR$(&HA);← Store characters for printing
PRINT #1, CHR$(&H1B);"T";CHR$(1);
PRINT #1, "CCCCC"; CHR$(&HA);← Store characters for printing
PRINT #1, "DDDDD"; CHR$(&HA);← Store characters for printing
PRINT #1, CHR$(&H1B);"T";CHR$(2);
PRINT #1, "EEEEE"; CHR$(&HC);← Batch print
```

Print Sample



Bit-Image Commands

The TM-U375/U375P supports the following bit-image commands:

Command	Name
ESC *	Select bit-image mode
GS *	Define downloaded bit image
GS /	Print downloaded bit image

ESC * *m* n_L n_H *d1 ... dk*

[Name] Select bit-image mode

[Format]

ASCII	ESC	*	*m*	n_L	n_H	*d1 ... dk*
Hex	1B	2A	*m*	n_L	n_H	*d1 ... dk*
Decimal	27	42	*m*	n_L	n_H	*d1 ... dk*

[Range]

$m = 0, 1$

$0 \le n_L \le 255$

$0 \le n_H \le 3$

$0 \le d \le 255$

ESC * *m* n_L n_H *d1 ... dk* selects a bit-image mode using ***m*** for the number of dots specified by ($n_L + n_H \times 256$). This command is used to print a predefined picture or logo. The modes selectable by ***m*** are as follows:

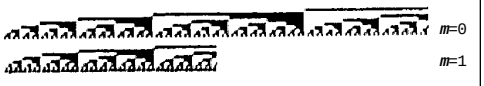
m	Mode	Vertical Direction		Horizontal Direction	
		Number of Dots	Dot Density (DPI)	Dot Density (DPI)	Total Dots in Standard Mode
0	8-dot single-density	8	72	80	200
1	8-dot double-density	8	72	160	400

Program Example

```
m=0:  GOSUB bitimage8
m=1:  GOSUB bitimage8
END

bitimage8:
  PRINT #1, CHR$(&H1B);"*";CHR$(m);CHR$(180);CHR$(0);
  FOR i=1 TO 180
    PRINT #1, CHR$(i);
  NEXT i
  PRINT #1, CHR$(&HA);
  RETURN
```

Print Sample



GS ∗ *x y d1 ... d(x × y × 8)*

[Name]	Define downloaded bit image					
[Format]	ASCII	GS	∗	*x*	*y*	*d1 ... d(x × y × 8)*
	Hex	1D	2A	*x*	*y*	*d1 ... d(x × y × 8)*
	Decimal	29	42	*x*	*y*	*d1 ... d(x × y × 8)*
[Range]	$1 \le x \le 255$					
	$1 \le y \le 255$					
	$x \times y \le 512$					
	$0 \le d \le 255$					

GS / *m*

[Name]	Print downloaded bit image			
[Format]	ASCII	GS	/	*m*
	Hex	1D	2F	*m*
	Decimal	29	47	*m*
[Range]	$0 \le m \le 1$			
	$48 \le m \le 49$			

GS ∗ *x y d1 ... d(x × y × 8)* defines a downloaded bit image using $x \times 8$ dots in the horizontal direction and $y \times 8$ dots in the vertical direction. Once a downloaded bit image has been defined, it is available until another definition is made; **ESC @** or **ESC &** is executed; the printer is reset; or the power is turned off. When this command is executed, the user-defined characters are cleared. The default setting is no downloaded bit image defined.

GS / *m* prints a downloaded bit image using the mode specified by ***m*** as follows. In standard mode, this command is effective only when there is no data in the print buffer. In page mode, double-density mode is disabled. This command is ignored if a downloaded bit image has not been defined.

m	Mode	Horizontal Dot Density	Set Adjacent Dots
0, 48	Normal	Double	Prohibited
1, 49	Double width	Single	Permitted

Program Example

```
x=16: y=5
PRINT #1, CHR$(&H1D);"*";CHR$(x);CHR$(y);
FOR i=1 TO x*y*8
  READ a$: d=VAL("&H"+a$)
  PRINT #1, CHR$(d);
NEXT i

FOR m=0 TO 1
  PRINT #1, CHR$(&H1D);"/";CHR$(m)
  PRINT #1, CHR$(&HA);
NEXT m
END

DATA FF,FF,FF,FF,FF,FF,FF,FF,FF,FF,C0,00,00,00,03,C0
DATA 00,00,00,03,CF,FF,FF,FF,F3,CF,FF,FF,FF,F3,CF,FF
DATA FF,FF,F3,CF,FF,FF,FF,F3,CF,FF,FF,FF,F3,CF,C0,FC
DATA 03,F3,CF,C0,FC,03,F3,CF,C0,FC,03,F3,CF,C0,FC,03
DATA F3,CF,C0,FC,03,F3,CF,C0,FC,03,F3,CF,C0,FC,03,F3
DATA CF,C0,FC,03,F3,CF,C0,FC,03,F3,CF,C0,00,03,F3,C0
DATA 00,00,00,03,C0,FF,00,03,F3,C3,FF,C0,03,F3,C7,FF
DATA E0,03,F3,C7,FF,F0,03,F3,CF,FF,F8,03,F3,CF,FF,FC
DATA 03,F3,CF,E3,FE,03,F3,CF,C1,FF,03,F3,CF,C0,FF,83
DATA F3,CF,C0,7F,C7,F3,CF,C0,3F,FF,F3,CF,C0,1F,FF,F3
DATA CF,C0,0F,FF,E3,CF,C0,07,FF,E3,CF,C0,03,FF,C3,C0
DATA 00,00,FF,03,C0,00,00,00,03,C0,3F,FF,FC,03,C0,FF
DATA FF,FF,03,C3,FF,FF,FF,C3,C7,FF,FF,FF,E3,C7,FF,FF
DATA FF,E3,CF,FF,FF,FF,F3,CF,F0,00,0F,F3,CF,C0,00,03
DATA F3,CF,C0,00,03,F3,CF,C0,00,03,F3,CF,C0,00,03,F3
DATA CF,C0,00,03,F3,CF,C0,00,03,F3,CF,C0,00,03,F3,CF
DATA C0,00,03,F3,CF,C0,00,03,F3,C0,00,00,00,03,C0,00
DATA 00,00,73,C0,00,00,03,C3,C0,00,00,1E,03,C0,00,00
DATA 70,03,C0,00,03,C0,03,C0,00,1E,00,03,C0,00,78,00
DATA 03,C0,03,C0,00,03,C0,0E,00,00,03,C0,78,00,00,03
DATA C3,C0,00,00,03,CE,00,00,00,03,C0,00,00,00,03,CF
```

Define downloaded bit image

← Print downloaded bit image

Program Example (continued)

```
DATA FF,FF,FF,F3,CF,FF,FF,FF,F3,CF,FF,FF,FF,F3,CF,FF
DATA FF,FF,F3,CF,FF,FF,FF,F3,CF,FF,FF,FF,F3,CF,C0,0F
DATA C0,03,CF,C0,0F,C0,03,CF,C0,0F,C0,03,CF,C0,0F,C0
DATA 03,CF,C0,0F,C0,03,CF,E0,1F,C0,03,CF,FF,FF,C0,03
DATA CF,FF,FF,CO,03,C7,FF,FF,80,03,C7,FF,FF,80,03,C1
DATA FF,FE,00,03,C0,3F,F0,00,03,C0,00,00,00,03,C0,0F
DATA FF,F0,03,C0,FF,FF,FF,03,C3,FF,FF,FF,C3,C7,FF,FF
DATA FF,E3,C7,FF,FF,FF,E3,CF,FF,FF,FF,F3,CF,F0,00,0F
DATA F3,CF,C0,00,03,F3,CF,C0,00,03,F3,CF,C0,00,03,F3
DATA CF,C0,00,03,F3,CF,C0,00,03,F3,CF,C0,00,03,F3,CF
DATA C0,00,03,F3,CF,F0,00,0F,F3,CF,FF,FF,FF,F3,C7,FF
DATA FF,FF,E3,C7,FF,FF,FF,E3,C3,FF,FF,FF,C3,C0,FF,FF
DATA FF,03,C0,0F,FF,F0,03,C0,00,00,00,03,C0,FF,00,03
DATA F3,C3,FF,C0,03,F3,C7,FF,E0,03,F3,C7,FF,F0,03,F3
DATA CF,FF,F8,03,F3,CF,FF,FC,03,F3,CF,E3,FE,03,F3,CF
DATA C1,FF,03,F3,CF,C0,FF,83,F3,CF,C0,7F,C7,F3,CF,C0
DATA 3F,FF,F3,CF,C0,1F,FF,F3,CF,C0,0F,FF,E3,CF,C0,07
DATA FF,E3,CF,C0,03,FF,C3,C0,00,00,FF,C3,C0,00,00,00
DATA 03,C0,00,00,00,03,FF,FF,FF,FF,FF,FF,FF,FF,FF,FF
```

Print Sample

← **GS / *0***

← **GS / *1***

Status Commands

The TM-U375/U375P supports the following status transmission commands. These commands can be used to determine the status of the printer, paper sensors, and peripheral devices connected to the printer.

Command	Name
GS a	Enable/disable Automatic Status Back (ASB)
GS r	Transmit status
DLE EOT	Real-time status transmission
ESC u	Transmit peripheral device status
ESC v	Transmit paper sensor status

GS a *n*

[Name] Enable/disable Automatic Status Back (ASB)

[Format]				
	ASCII	GS	a	*n*
	Hex	1D	61	*n*
	Decimal	29	97	*n*

[Range] $0 \le n \le 255$

GS a *n* selects a status for ASB transmission. ASB is enabled if any status item is selected. The printer automatically transmits a 4-byte status message whenever the status changes. Multiple status items can be selected. When ***n***=0, ASB is disabled. The default (***n***=0 or 2) depends on the DIP switch settings. If ASB is enabled when the printer is disabled by the **ESC =** command, the printer transmits a 4-byte status message whenever the status changes. The status items are selected using ***n*** as follows:

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Drawer kick-out connector pin 3 status disabled.
	On	01	1	Drawer kick-out connector pin 3 status enabled.
1	Off	00	0	On-line/off-line status disabled.
	On	02	2	On-line/off-line status enabled.
2	Off	00	0	Error status disabled.
	On	04	4	Error status enabled.
3	Off	00	0	Paper roll sensor status disabled.
	On	08	8	Paper roll sensor status enabled.
4	—	—	—	Undefined.
5	Off	00	0	Cut-sheet (slip or validation) sensor and status disabled.
	On	20	32	Cut-sheet (slip or validation) sensor and status enabled.
6, 7	—	—	—	Undefined.

Program Example

```
PRINT #1, CHR$(&H1D);"a";CHR$(4); ← Enable "Error" status
```

First byte (printer information)

Bit	Off/On	Hex	Decimal	Status for ASB
0	Off	00	0	Not used. Fixed to Off.
1	Off	00	0	Not used. Fixed to Off.
2	Off	00	0	Drawer kick-out connector pin 3 is LOW.
	On	04	4	Drawer kick-out connector pin 3 is HIGH.

Bit	Off/On	Hex	Decimal	Status for ASB
3	Off	00	0	On-line.
	On	08	8	Off-line.
4	On	10	16	Not used. Fixed to On.
5	Off	00	0	Cover closed.
	On	20	32	Cover open.
6	Off	00	0	Paper is not being fed by the paper feed button.
	On	40	64	Paper is being fed by the paper feed button.
7	Off	00	0	Not used. Fixed to Off.

Second byte (printer information)

Bit	Off/On	Hex	Decimal	Status for ASB
0, 1	—	—	—	Undefined.
2	Off	00	0	No mechanical error.
	On	04	4	Mechanical error occurred.
3	—	—	—	Undefined.
4	Off	00	0	Not used. Fixed to Off.
5	Off	00	0	No unrecoverable error.
	On	20	32	Unrecoverable error occurred.
6	Off	00	0	No automatically recoverable error.
	On	40	64	Automatically recoverable error occurred.
7	Off	00	0	Not used. Fixed to Off.

Third byte (paper sensor information)

Bit	Off/On	Hex	Decimal	Status for ASB
0, 1	Off	00	0	Paper roll near-end sensor: paper adequate.
	On	03	3	Paper roll near-end sensor: paper near end.
2, 3	—	—	—	Undefined.
4	Off	00	0	Not used. Fixed to Off.
5, 6	Off	00	0	Cut-sheet sensor: slip or validation paper present.
	On	60	96	Cut-sheet sensor: slip or validation paper not present.
7	Off	00	0	Not used. Fixed to Off.

Fourth byte (paper sensor information)

Bit	Off/On	Hex	Decimal	Status for ASB
0	Off	00	0	Slip paper selected.
	On	01	1	Slip paper not selected.
1	Off	00	0	Slip paper status: possible to print.
	On	02	2	Slip paper status: not possible to print.
2	Off	00	0	Validation paper selected.
	On	04	4	Validation paper not selected.
3	Off	00	0	Validation paper status: possible to print.
	On	08	8	Validation paper status: not possible to print.
4	Off	00	0	Not used. Fixed to Off.
5, 6	Off	00	0	Cut-sheet sensor: slip or validation paper present.
	On	60	96	Cut-sheet sensor: slip or validation paper not present.
7	Off	00	0	Not used. Fixed to Off.

GS r *n*

[Name] Transmit status

[Format]

ASCII	GS	r	*n*
Hex	1D	72	*n*
Decimal	29	114	*n*

[Range] $1 \le n \le 3$

$49 \le n \le 51$

GS r *n* transmits 1 byte of status data specified by ***n*** as follows: paper sensor status when ***n***=1 or 49, drawer kick-out connector status when ***n***=2 or 50, and cut-sheet (slip or validation paper) status when ***n***=3 or 51.

Program Example

```
PRINT #1, CHR$(&H1D);"r";CHR$(1); ← Transmits paper sensor status
```

Paper sensor status (***n***=1, 49)

Bit	Off/On	Hex	Decimal	Status
0, 1	Off	00	0	Paper roll near-end sensor: paper adequate.
	On	03	3	Paper roll near-end sensor: paper near end.
2, 3	—	—	—	Undefined.
4	Off	00	0	Not used. Fixed to Off.
5, 6	Off	00	0	Cut-sheet sensor: slip or validation paper present.
	On	60	96	Cut-sheet sensor: slip or validation paper not present.
7	Off	00	0	Not used. Fixed to Off.

Drawer kick-out connector status (***n***=2, 50)

Bit	Off/On	Hex	Decimal	Status
0	Off	00	0	Drawer kick-out connector pin 3 is LOW.
	On	01	1	Drawer kick-out connector pin 3 is HIGH.
1-3	—	—	—	Undefined.
4	Off	00	0	Not used. Fixed to Off.
5, 6	—	—	—	Undefined.
7	Off	00	0	Not used. Fixed to Off.

Cut-sheet (slip or validation paper) status (***n***=3, 51)

Transmits the values 00H - 0FH, indicating the remaining printable area as follows:

Number of Remaining Dots	Cut- Sheet Status	
	Hex	Decimal
0 - 8	00H	0
9 - 17	01H	1
18 - 26 • • • 117 - 125	02H • • • 0DH	2 • • • 13
126 - 134	0EH	14
135 and up	0FH	15

DLE EOT *n*

[Name] Real-time status transmission

[Format]	ASCII	DLE	EOT	*n*
	Hex	10	04	*n*
	Decimal	16	4	*n*

[Range] $1 \le n \le 6$

DLE EOT *n* transmits the specified status in real time. This command is executed even when the printer is off-line, the print buffer is full, or an error occurs. ***n*** indicates the status function as follows:

n	Function
1	Transmit printer status
2	Transmit off-line status
3	Transmit error status
4	Transmit paper roll sensor status

n	Function
5	Transmit slip paper status
6	Transmit validation paper status

Program Example

```
PRINT #1, CHR$(&H10);CHR$(&H4);CHR$(2); ←Transmits off-line status
```

Printer status (*n*=1)

Bit	Off/On	Hex	Decimal	Status
0	Off	00	0	Not used. Fixed to Off.
1	On	02	2	Not used. Fixed to On.
2	Off	00	0	Drawer kick-out connector pin 3 is LOW.
	On	04	4	Drawer kick-out connector pin 3 is HIGH.
3	Off	00	0	On-line.
	On	08	8	Off-line.
4	On	10	16	Not used. Fixed to On.
5, 6	—	—	—	Undefined.
7	Off	00	0	Not used. Fixed to Off.

Off-line status (*n*=2)

Bit	Off/On	Hex	Decimal	Status
0	Off	00	0	Not used. Fixed to Off.
1	On	02	2	Not used. Fixed to On.
2	Off	00	0	Cover is closed.
	On	04	4	Cover is open.
3	Off	00	0	Paper is not being fed by the paper feed button.
	On	08	8	Paper is being fed by the paper feed button.
4	On	10	16	Not used. Fixed to On.
5	Off	00	0	No paper-end stop.
	On	20	32	Printing stops due to paper-end.
6	Off	00	0	No error.
	On	40	64	Error occurred.
7	Off	00	0	Not used. Fixed to Off.

Error status (*n*=3)

Bit	Off/On	Hex	Decimal	Status
0	Off	00	0	Not used. Fixed to Off.
1	On	02	2	Not used. Fixed to On.
2	Off	00	0	No mechanical error.
	On	04	4	Mechanical error occurred.
3	—	—	—	Undefined.
4	On	10	16	Not used. Fixed to On.
5	Off	00	0	No unrecoverable error.
	On	20	32	Unrecoverable error occurred.
6	Off	00	0	No automatically recoverable error.
	On	40	64	Automatically recoverable error occurred.
7	Off	00	0	Not used. Fixed to Off.

Paper roll sensor status (*n*=4)

Bit	Off/On	Hex	Decimal	Status
0	Off	00	0	Not used. Fixed to Off.
1	On	02	2	Not used. Fixed to On.
2, 3	Off	00	0	Paper roll near-end sensor: paper adequate.
	On	0C	12	Paper roll near-end sensor: paper near end.
4	On	10	16	Not used. Fixed to On.
5, 6	—	—	—	Undefined.
7	Off	00	0	Not used. Fixed to Off.

Slip paper status (*n*=5)

Bit	Off/On	Hex	Decimal	Status
0	Off	00	0	Not used. Fixed to Off.
1	On	02	2	Not used. Fixed to On.
2	Off	00	0	Slip paper selected.
	On	04	4	Slip paper not selected.
3	Off	00	0	Does not wait for slip paper insertion.
	On	08	8	Waits for slip paper insertion.
4	On	10	16	Not used. Fixed to On.
5, 6	Off	00	0	Cut-sheet sensor: slip or validation paper present.
	On	60	96	Cut-sheet sensor: slip or validation paper not persent.
7	Off	00	0	Not used. Fixed to Off.

Validation paper status (***n***=6)

Bit	Off/On	Hex	Decimal	Status
0	Off	00	0	Not used. Fixed to Off.
1	On	02	2	Not used. Fixed to On.
2	Off	00	0	Validation paper selected.
	On	04	4	Validation paper not selected.
3	Off	00	0	Does not wait for validation paper insertion.
	On	08	8	Waits for validation paper insertion.
4	On	10	16	Not used. Fixed to On.
5, 6	Off	00	0	Cut-sheet sensor: slip or validation paper present.
	On	60	96	Cut-sheet sensor: slip or validation paper not persent.
7	Off	00	0	Not used. Fixed to Off.

ESC u *n*

[Name] Transmit peripheral device status

[Format]

ASCII	ESC	u	*n*
Hex	1B	75	*n*
Decimal	27	117	*n*

[Range] *n* = 0, 48

ESC u *n* transmits the status of drawer kick-out connector pin 3 as 1 byte of data when ***n***=0 or 48. This command allows the host to determine the status of a peripheral device. **GS r** is preferred for checking the status because **ESC u** is not a recommended command. The status to be transmitted is shown in the table below.

Program Example

```
PRINT #1, CHR$(&H1B);"p";CHR$(0);CHR$(25);CHR$(250); ←Generates a pulse
PRINT #1, CHR$(&H1B);"u";CHR$(0);
```

Peripheral device status

Bit	Off/On	Hex	Decimal	Status
0	Off	00	0	Drawer kick-out connector pin 3 is LOW.
	On	01	1	Drawer kick-out connector pin 3 is HIGH.
1-3	—	—	—	Undefined.
4	Off	00	0	Not used. Fixed to Off.
5, 6	—	—	—	Undefined.
7	Off	00	0	Not used. Fixed to Off.

ESC v

[Name] Transmit paper sensor status

[Format]

ASCII	ESC	v
Hex	1B	76
Decimal	27	118

ESC v transmits the status of a paper sensor as 1 byte of data. **GS r** is preferred for checking the status because **ESC v** is not a recommended command. The status to be transmitted is shown in the table below.

```
Program Example

PRINT #1, CHR$(&H1B);"v";
```

Paper sensor status

Bit	Off/On	Hex	Decimal	Status
0, 1	Off	00	0	Paper roll near-end sensor: paper adequate.
	On	03	3	Paper roll near-end sensor: paper near end.
2, 3	—	—	—	Undefined.
4	Off	00	0	Not used. Fixed to Off.
5, 6	Off	00	0	Cut-sheet sensor: slip or validation paper present.
	On	60	96	Cut-sheet sensor: slip or validation paper not present.
7	Off	00	0	Not used. Fixed to Off.

Mechanism Control Commands

The TM-U375/U375P supports the following mechanism control commands:

Command	Name
ESC <	Return home
ESC U	Turn unidirectional printing mode on/off
ESC q	Paper release

ESC <

[Name] Return home

[Format]

ASCII	ESC	<
Hex	1B	3C
Decimal	27	60

ESC < moves the print head to the home position. The print head first moves to the left-most position, then to the right-most position, and then to approximately the center of the line.

To prevent paper jams, do not use this command while slip paper is inserted.

Program Example

```
PRINT #1, CHR$(&H1B);"<";
```

ESC U *n*

[Name] Turn unidirectional printing mode on/off

[Format]	ASCII	ESC	U	*n*
	Hex	1B	55	*n*
	Decimal	27	85	*n*

[Range] $0 \le n \le 255$

ESC U *n* turns unidirectional printing mode on or off. When the LSB (least significant bit) of ***n*** is 1, unidirectional printing is turned on; when it is 0, unidirectional printing is turned off and bidirectional printing mode is turned on. Unidirectional printing can be turned on when printing double-height characters to ensure that the top and bottom of the characters are aligned. The default setting is ***n***=0 in standard mode and ***n***=1 in page mode.

Program Example

```
PRINT #1, CHR$(&H1B);"U";CHR$(1); ← Unidirectional printing mode turned on
```

ESC q

[Name] Paper release

[Format]	ASCII	ESC	q
	Hex	1B	71
	Decimal	27	113

ESC q releases the paper.

Program Example

```
PRINT #1, CHR$(&H1B);"q"
```

Miscellaneous Function Commands

The TM-U375/U375P supports the following miscellaneous function commands:

Command	Name
GS P	Set horizontal and vertical motion units
ESC @	Initialize printer
GS E	Select head control method
GS I	Transmit printer ID
ESC p	Generate pulse
ESC =	Select peripheral device
ESC L	Select page mode
DLE ENQ	Real-time request to printer

GS P *x y*

[Name]	Set horizontal and vertical motion units				
[Format]	ASCII	GS	P	*x*	*y*
	Hex	1D	50	*x*	*y*
	Decimal	29	80	*x*	*y*
[Range]	$0 \le x \le 255$				
	$0 \le y \le 255$				

GS P *x y* sets the horizontal and vertical motion units to $1/x$ and $1/y$ inches, respectively. The horizontal and vertical motion units indicate the minimum pitch used for calculating the values of related commands (shown below). The default values are x=160 and y=144. The calculated result when using this command with other commands is truncated to the minimum value of the mechanical pitch (1/160 inch horizontal and 1/144 inch vertical) or an exact multiple of that minimum value. When x and y are set to 0, the default setting of each value is used.

Commands used with the horizontal motion unit ($1/x$) in standard mode: **ESC SP**, **ESC $**, **ESC W**, **ESC /**, **GS L**, and **GS W**.

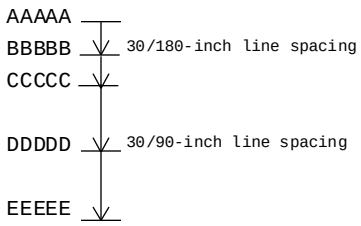
Commands used with the vertical motion unit ($1/y$) in standard mode: **ESC 3**, **ESC J**, and **ESC W**.

Commands used with the horizontal and vertical motion units ($1/x$ and $1/y$) in page mode (either x or y can be used, depending on the print direction set with **ESC T**): **ESC SP**, **ESC $**, **ESC 3**, **ESC J**, **ESC W**, and **ESC **.

Program Example

```
PRINT #1, CHR$(&H1D);"P";CHR$(180);CHR$(180);
PRINT #1, CHR$(&H1B);"3";CHR$(30); ← Set line spacing
PRINT #1, "AAAAA"; CHR$(&HA);
PRINT #1, "BBBBB"; CHR$(&HA);
PRINT #1, CHR$(&H1D);"P";CHR$(180);CHR$(90);
PRINT #1, CHR$(&H1B);"3";CHR$(30); ← Set line spacing
PRINT #1, "CCCCC"; CHR$(&HA);
PRINT #1, "DDDDD"; CHR$(&HA);
PRINT #1, "EEEEE"; CHR$(&HA);
```

Print Sample



ESC @

[Name] Initialize printer

[Format]			
ASCII	ESC	@	
Hex	1B	40	
Decimal	27	64	

ESC @ initializes the printer. All settings, including character font and line spacing settings, are canceled. The data in the print buffer is cleared, and the printer mode is reset to the mode that was in effect when the power was turned on. The DIP switch settings are not checked again, and the data in the receive buffer is not cleared.

Program Example

```
PRINT #1, CHR$(&H1B);"!";CHR$(56);
PRINT #1, "AAAAA"; CHR$(&HA);
PRINT #1, CHR$(&H1B);"@";
PRINT #1, "BBBBB"; CHR$(&HA);
```

Print Sample

AAAAA

BBBBB ← All settings are canceled after **ESC** @ is executed

GS E *n*

[Name] Select head control method

[Format]				
ASCII	GS	E	*n*	
Hex	1D	45	*n*	
Decimal	29	69	*n*	

[Range] $0 \le n \le 255$

GS E *n* selects the head energizing time corresponding to the paper type selected by **ESC c 0**. The default settings are Standard (***n***=1) when the paper roll is selected and Copy (***n***=0) when a cut sheet (slip or validation paper) is selected. Independent settings can be used for each paper type. In standard mode, this command is enabled only when input at the beginning of a line. The bit value of ***n*** is used as follows:

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Head energizing time: Copy.
	On	01	1	Head energizing time: Standard.
1-7	—	—	—	Undefined.

Program Example

```
PRINT #1,CHR$(&H1B);"c0";CHR$(1);← Select paper roll
PRINT #1,CHR$(&H1D);"E";CHR$(0); ← Select copy mode
```

GS I *n*

[Name] Transmit printer ID

[Format]

ASCII	GS	I	*n*
Hex	1D	49	*n*
Decimal	29	73	*n*

[Range] $1 \le n \le 3$

$49 \le n \le 51$

GS I *n* transmits the printer ID specified by ***n*** as follows. Each printer ID consists of 1 byte of data.

n	Printer ID	Specification	ID (hexadecimal)
1, 49	Printer model ID	TM-U375/U375P	0AH
2, 50	Type ID	See table below.	
3, 51	ROM version ID	Depends on ROM version.	

Type ID (***n***=2 or 50)

Bit	Off/On	Hex	Decimal	Function
0	Off	00	0	Two-byte character code not supported.
1	On	00	0	No auto-cutter equipped.
2	Off	00	0	Not customer display equipped (DIP switch 2-1 is Off).
	On	04	4	Customer display equipped (DIP switch 2-1 is On).
3	—	—	—	Undefined.
4	Off	00	0	Not used. Fixed to Off.
5, 6	—	—	—	Undefined.
7	Off	00	0	Not used. Fixed to Off.

Program Example

```
PRINT #1, CHR$(&H1D);"I";CHR$(1);← Transmits printer ID
```

ESC p *m t1 t2*

[Name] Generate pulse

[Format]	ASCII	ESC	p	*m*	*t1*	*t2*
	Hex	1B	70	*m*	*t1*	*t2*
	Decimal	27	112	*m*	*t1*	*t2*

[Range] $m = 0, 1, 48, 49$

$0 \le t1 \le 255$

$0 \le t2 \le 255$

ESC p *m t1 t2* sends a pulse (on time= ***t1*** × 2 msec / off time= ***t2*** × 2 msec) to the specified connector pin. When ***m***=0 or 48, the pulse is sent to drawer kick-out connector pin 2; when ***m***=1 or 49, the pulse is sent to drawer kick-out connector pin 5.

Program Example

```
PRINT #1, CHR$(&H1B);"p";CHR$(0);CHR$(25);CHR$(250);
```

ESC = *n*

[Name] Select peripheral device

[Format]	ASCII	ESC	=	*n*
	Hex	1B	3D	*n*
	Decimal	27	61	*n*

[Range] $1 \le n \le 3$

ESC = *n* selects the device to which the host computer sends data, based on the value of ***n*** as follows: When the printer is disabled (***n***=2), it ignores all received data with the exception of the **DLE ENQ *1*** and **DLE ENQ *2*** commands. The default setting varies according to the DIP switch settings.

n	**Peripheral Device Status**
1	Only printer selected.
2	Only customer display selected.
3	Both printer and customer display selected.

Program Example

```
PRINT #1, CHR$(&H1B);"=";CHR$(2);← Customer display selected
PRINT #1, "AAAAA";
PRINT #1, CHR$(&H1B);"=";CHR$(1);← Printer selected
PRINT #1, " BBBBB";
PRINT #1, CHR$(&H1B);"=";CHR$(3);← Both printer and customer display selected
PRINT #1, " CCCCC"; CHR$(&HA);
```

Display Sample

```
AAAAA_
```

↓ Selects only the printer

```
AAAAA_
```

↓ Selects both the printer and the customer display

```
AAAAA CCCCC_
```

Print Sample

```
BBBBB CCCCC
```

ESC L

[Name] Select page mode

[Format]	ASCII	ESC	L
	Hex	1B	4C
	Decimal	27	76

ESC L switches from standard mode to page mode. This command is enabled only when input at the beginning of a line in standard mode; it has no effect in page mode. Standard mode is selected as the default. When **FF** or **ESC @** is entered in page mode, the printer returns to standard mode.

Program Example

```
PRINT #1, CHR$(&H1B);"L";← Select page mode
PRINT #1, CHR$(&H1B);"W";CHR$(0);CHR$(0);CHR$(0);
CHR$(0);CHR$(50);CHR$(0);CHR$(50);CHR$(0);
PRINT #1, CHR$(&H1B);"T";CHR$(0);
PRINT #1, "AAAAA"; CHR$(&HA);← Store characters for printing
PRINT #1, "BBBBB"; CHR$(&HA);← Store characters for printing
PRINT #1, "CCCCC"; CHR$(&HC);← Batch print
```

Print Sample

```
AAAAA
BBBBB
CCCCC
```

DLE ENQ *n*

[Name] Real-time request to printer

[Format]	ASCII	DLE	ENQ	*n*
	Hex	10	05	*n*
	Decimal	16	5	*n*

[Range] $1 \leq n \leq 3$

DLE ENQ *n* responds to a request in real time from the host computer, specified by ***n*** as shown below. This command is executed even when the printer is off-line, the receive buffer is full, or an error occurs. It is valid only when ***n***=1 or ***n***=2, or when a recoverable error other than an automatically recoverable error occurs. When ***n***=3, it is valid only when the printer is waiting for a cut sheet (slip or validation paper).

n	**Request**
1	Restarts printing from the beginning of the line where an error occurred, after recovering from the error.
2	Recovers from an error after clearing the receive and print buffers.
3	Cancels cut-sheet waiting status.

Program Example

```
PRINT #1, CHR$(&H10);CHR$(&H5);CHR$(3);
```

Character Code Tables

SP in a table represents space. Refer to page 1-51 for information on how to read these tables.

Page 0 (PC437: U.S.A., Standard Europe) (International character set: U.S.A)

HEX	BIN	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
		0000	0001	0010	0011	0100	0101	0110	0111	1000	1001	1010	1011	1100	1101	1110	1111
0	0000	NUL 00	DLE 16	SP 32	0 48	@ 64	P 80	` 96	p 112	Ç 128	É 144	á 160	▒ 176	└ 192	╨ 208	α 224	≡ 240
1	0001	01	17	! 33	1 49	A 65	Q 81	a 97	q 113	ü 129	æ 145	í 161	▓ 177	┴ 193	╤ 209	ß 225	± 241
2	0010	02	18	" 34	2 50	B 66	R 82	b 98	r 114	é 130	Æ 146	ó 162	▓ 178	┬ 194	╥ 210	Γ 226	≥ 242
3	0011	03	19	# 35	3 51	C 67	S 83	c 99	s 115	â 131	ô 147	ú 163	│ 179	├ 195	╙ 211	π 227	≤ 243
4	0100	EOT 04	20	$ 36	4 52	D 68	T 84	d 100	t 116	ä 132	ö 148	ñ 164	┤ 180	─ 196	╘ 212	Σ 228	⌠ 244
5	0101	ENQ 05	21	% 37	5 53	E 69	U 85	e 101	u 117	à 133	ò 149	Ñ 165	╡ 181	┼ 197	╒ 213	σ 229	⌡ 245
6	0110	06	22	& 38	6 54	F 70	V 86	f 102	v 118	å 134	û 150	ª 166	╢ 182	╞ 198	╓ 214	µ 230	÷ 246
7	0111	07	23	' 39	7 55	G 71	W 87	g 103	w 119	ç 135	ù 151	º 167	╖ 183	╟ 199	╫ 215	τ 231	≈ 247
8	1000	08	CAN 24	(40	8 56	H 72	X 88	h 104	x 120	ê 136	ÿ 152	¿ 168	╕ 184	╚ 200	╪ 216	Φ 232	° 248
9	1001	HT 09	25	) 41	9 57	I 73	Y 89	i 105	y 121	ë 137	Ö 153	⌐ 169	╣ 185	╔ 201	┘ 217	Θ 233	• 249
A	1010	LF 10	26	* 42	: 58	J 74	Z 90	j 106	z 122	è 138	Ü 154	¬ 170	║ 186	╩ 202	┌ 218	Ω 234	· 250
B	1011	11	ESC 27	+ 43	; 59	K 75	[91	k 107	{ 123	ï 139	¢ 155	½ 171	╗ 187	╦ 203	■ 219	δ 235	√ 251
C	1100	FF 12	28	, 44	< 60	L 76	\ 92	l 108	¦ 124	î 140	£ 156	¼ 172	╝ 188	╠ 204	▄ 220	∞ 236	n 252
D	1101	CR 13	GS 29	− 45	= 61	M 77	] 93	m 109	} 125	ì 141	¥ 157	¡ 173	╜ 189	═ 205	▌ 221	ø 237	² 253
E	1110	14	30	. 46	> 62	N 78	^ 94	n 110	~ 126	Ä 142	₧ 158	« 174	╛ 190	╬ 206	▐ 222	∈ 238	■ 254
F	1111	15	31	/ 47	? 63	O 79	_ 95	o 111	SP 127	Å 143	ƒ 159	» 175	┐ 191	╧ 207	▀ 223	∩ 239	SP 255

Page 1 (Katakana)

HEX	BIN	8	9	A	B	C	D	E	F
		1000	1001	1010	1011	1100	1101	1110	1111
0	0000	ー 128	┴ 144	SP 160	― 176	タ 192	ミ 208	二 224	× 240
1	0001	▬ 129	┬ 145	。 161	ア 177	チ 193	ム 209	├ 225	円 241
2	0010	▬ 130	┤ 146	「 162	イ 178	ツ 194	メ 210	┼ 226	年 242
3	0011	▬ 131	├ 147	」 163	ウ 179	テ 195	モ 211	┤ 227	月 243
4	0100	■ 132	─ 148	、 164	エ 180	ト 196	ヤ 212	◢ 228	日 244
5	0101	■ 133	─ 149	・ 165	オ 181	ナ 197	ユ 213	◣ 229	時 245
6	0110	■ 134	│ 150	ヲ 166	カ 182	ニ 198	ヨ 214	◥ 230	分 246
7	0111	■ 135	│ 151	ァ 167	キ 183	ヌ 199	ラ 215	◤ 231	秒 247
8	1000	▏ 136	┌ 152	ィ 168	ク 184	ネ 200	リ 216	♠ 232	〒 248
9	1001	▎ 137	┐ 153	ゥ 169	ケ 185	ノ 201	ル 217	♥ 233	市 249
A	1010	▍ 138	└ 154	ェ 170	コ 186	ハ 202	レ 218	✦ 234	区 250
B	1011	▋ 139	┘ 155	ォ 171	サ 187	ヒ 203	ロ 219	♣ 235	町 251
C	1100	▊ 140	┌ 156	ャ 172	シ 188	フ 204	ワ 220	● 236	村 252
D	1101	▉ 141	┐ 157	ュ 173	ス 189	ヘ 205	ン 221	○ 237	人 253
E	1110	▉ 142	└ 158	ョ 174	セ 190	ホ 206	゛ 222	／ 238	▒ 254
F	1111	┼ 143	┘ 159	ッ 175	ソ 191	マ 207	゜ 223	＼ 239	SP 255

Page 2 (PC850: Multilingual)

	HEX	8	9	A	B	C	D	E	F
HEX	BIN	1000	1001	1010	1011	1100	1101	1110	1111
0	0000	Ç 128	É 144	á 160	▒ 176	└ 192	ð 208	Ó 224	— 240
1	0001	ü 129	æ 145	í 161	▒ 177	┴ 193	Ð 209	ß 225	± 241
2	0010	é 130	Æ 146	ó 162	▒ 178	┬ 194	Ê 210	Ô 226	‗ 242
3	0011	â 131	ô 147	ú 163	│ 179	├ 195	Ë 211	Ò 227	¾ 243
4	0100	ä 132	ö 148	ñ 164	┤ 180	─ 196	È 212	õ 228	¶ 244
5	0101	à 133	ò 149	Ñ 165	Á 181	┼ 197	ı 213	Õ 229	§ 245
6	0110	å 134	û 150	ª 166	Â 182	ã 198	Í 214	µ 230	÷ 246
7	0111	ç 135	ù 151	º 167	À 183	Ã 199	Î 215	þ 231	¸ 247
8	1000	ê 136	ÿ 152	¿ 168	© 184	╚ 200	Ï 216	Þ 232	° 248
9	1001	ë 137	Ö 153	® 169	╣ 185	╔ 201	┘ 217	Ú 233	¨ 249
A	1010	è 138	Ü 154	¬ 170	║ 186	╩ 202	┌ 218	Û 234	· 250
B	1011	ï 139	ø 155	½ 171	╗ 187	╦ 203	■ 219	Ù 235	¹ 251
C	1100	î 140	£ 156	¼ 172	╝ 188	╠ 204	▄ 220	ý 236	³ 252
D	1101	ì 141	Ø 157	¡ 173	¢ 189	═ 205	¦ 221	Ý 237	² 253
E	1110	Ä 142	× 158	« 174	¥ 190	╬ 206	ì 222	¯ 238	▮ 254
F	1111	Å 143	ƒ 159	» 175	┐ 191	¤ 207	▀ 223	´ 239	SP 255

Page 3 (PC860: Portuguese)

	HEX	8	9	A	B	C	D	E	F
HEX	BIN	1000	1001	1010	1011	1100	1101	1110	1111
0	0000	Ç 128	É 144	á 160	▒ 176	└ 192	╨ 208	α 224	≡ 240
1	0001	ü 129	À 145	í 161	▒ 177	┴ 193	╤ 209	ß 225	± 241
2	0010	é 130	È 146	ó 162	▒ 178	┬ 194	╥ 210	Γ 226	≥ 242
3	0011	â 131	ô 147	ú 163	│ 179	├ 195	╙ 211	π 227	≤ 243
4	0100	ã 132	õ 148	ñ 164	┤ 180	─ 196	╘ 212	Σ 228	⌠ 244
5	0101	à 133	ò 149	Ñ 165	╡ 181	┼ 197	╒ 213	σ 229	⌡ 245
6	0110	Á 134	Ú 150	ª 166	╢ 182	╞ 198	╓ 214	µ 230	÷ 246
7	0111	ç 135	ù 151	º 167	╖ 183	╟ 199	╫ 215	τ 231	≈ 247
8	1000	ê 136	Ì 152	¿ 168	╕ 184	╚ 200	╪ 216	Φ 232	° 248
9	1001	Ê 137	Õ 153	Ò 169	╣ 185	╔ 201	┘ 217	θ 233	• 249
A	1010	è 138	Ü 154	¬ 170	║ 186	╩ 202	┌ 218	Ω 234	· 250
B	1011	Í 139	¢ 155	½ 171	╗ 187	╦ 203	■ 219	δ 235	√ 251
C	1100	Ô 140	£ 156	¼ 172	╝ 188	╠ 204	▄ 220	∞ 236	n 252
D	1101	ì 141	Ù 157	¡ 173	╜ 189	═ 205	▌ 221	ø 237	² 253
E	1110	Ã 142	₧ 158	« 174	╛ 190	╬ 206	▐ 222	∈ 238	■ 254
F	1111	Â 143	Ó 159	» 175	┐ 191	╧ 207	▀ 223	∩ 239	SP 255

Page 4 (PC863: Canadian-French)

	HEX	8	9	A	B	C	D	E	F
HEX	BIN	1000	1001	1010	1011	1100	1101	1110	1111
0	0000	Ç 128	É 144	¦ 160	▒ 176	└ 192	╨ 208	α 224	≡ 240
1	0001	ü 129	È 145	´ 161	▒ 177	┴ 193	╤ 209	ß 225	± 241
2	0010	é 130	Ê 146	ó 162	▓ 178	┬ 194	╥ 210	Γ 226	≥ 242
3	0011	â 131	ô 147	ú 163	│ 179	├ 195	╙ 211	π 227	≤ 243
4	0100	Â 132	Ë 148	¨ 164	┤ 180	─ 196	╘ 212	Σ 228	⌠ 244
5	0101	à 133	Ï 149	¸ 165	╡ 181	┼ 197	╒ 213	σ 229	⌡ 245
6	0110	¶ 134	û 150	ª 166	╢ 182	╞ 198	╓ 214	µ 230	÷ 246
7	0111	ç 135	ù 151	‗ 167	╖ 183	╟ 199	╫ 215	τ 231	≈ 247
8	1000	ê 136	¤ 152	î 168	╕ 184	╚ 200	╪ 216	Φ 232	° 248
9	1001	ë 137	Ô 153	⌐ 169	╣ 185	╔ 201	┘ 217	Θ 233	• 249
A	1010	è 138	Ü 154	¬ 170	║ 186	╩ 202	┌ 218	Ω 234	· 250
B	1011	ï 139	¢ 155	½ 171	╗ 187	╦ 203	▉ 219	δ 235	√ 251
C	1100	î 140	£ 156	¼ 172	╝ 188	╠ 204	▄ 220	∞ 236	n 252
D	1101	═ 141	Ù 157	¾ 173	╜ 189	═ 205	▌ 221	ø 237	² 253
E	1110	Ä 142	Û 158	« 174	╛ 190	╬ 206	▐ 222	∈ 238	■ 254
F	1111	§ 143	ƒ 159	» 175	┐ 191	╧ 207	▀ 223	∩ 239	SP 255

Page 5 (PC865: Nordic)

	HEX	8	9	A	B	C	D	E	F
HEX	BIN	1000	1001	1010	1011	1100	1101	1110	1111
0	0000	Ç 128	É 144	á 160	▒ 176	└ 192	╨ 208	α 224	≡ 240
1	0001	ü 129	æ 145	í 161	▒ 177	┴ 193	╤ 209	ß 225	± 241
2	0010	é 130	Æ 146	ó 162	▓ 178	┬ 194	╥ 210	Γ 226	≥ 242
3	0011	â 131	ô 147	ú 163	│ 179	├ 195	╙ 211	π 227	≤ 243
4	0100	ä 132	ö 148	ñ 164	┤ 180	─ 196	╘ 212	Σ 228	⌠ 244
5	0101	à 133	ò 149	Ñ 165	╡ 181	┼ 197	╒ 213	σ 229	⌡ 245
6	0110	å 134	û 150	ª 166	╢ 182	╞ 198	╓ 214	µ 230	÷ 246
7	0111	ç 135	ù 151	º 167	╖ 183	╟ 199	╫ 215	τ 231	≈ 247
8	1000	ê 136	ÿ 152	¿ 168	╕ 184	╚ 200	╪ 216	Φ 232	° 248
9	1001	ë 137	Ö 153	⌐ 169	╣ 185	╔ 201	┘ 217	Θ 233	• 249
A	1010	è 138	Ü 154	¬ 170	║ 186	╩ 202	┌ 218	Ω 234	· 250
B	1011	ï 139	ø 155	½ 171	╗ 187	╦ 203	▉ 219	δ 235	√ 251
C	1100	î 140	£ 156	¼ 172	╝ 188	╠ 204	▄ 220	∞ 236	n 252
D	1101	ì 141	Ø 157	¡ 173	╜ 189	═ 205	▌ 221	ø 237	² 253
E	1110	Ä 142	₧ 158	« 174	╛ 190	╬ 206	▐ 222	∈ 238	■ 254
F	1111	Å 143	ƒ 159	¤ 175	┐ 191	╧ 207	▀ 223	∩ 239	SP 255

International character set

Country	ASCII code												
	Hex	23	24	40	5B	5C	5D	5E	60	7B	7C	7D	7E
	Dec	35	36	64	91	92	93	94	96	123	124	125	126
U.S.A.		#	$	@	[	\	]	^	`	{	¦	}	~
France		#	$	à	°	ç	§	^	`	é	ù	è	¨
Germany		#	$	§	Ä	Ö	Ü	^	`	ä	ö	ü	ß
U.K.		£	$	@	[	\	]	^	`	{	¦	}	~
Denmark I		#	$	@	Æ	Ø	Å	^	`	æ	ø	å	~
Sweden		#	¤	É	Ä	Ö	Å	Ü	é	ä	ö	å	ü
Italy		#	$	@	°	\	é	^	ù	à	ò	è	ì
Spain		Pt	$	@	¡	Ñ	¿	^	`	¨	ñ	}	~
Japan		#	$	@	[	¥	]	^	`	{	¦	}	~
Norway		#	¤	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü
Denmark II		#	$	É	Æ	Ø	Å	Ü	é	æ	ø	å	ü

Using the Character Code Tables

The example below uses Page 0 (PC437) (see page 1-48) to illustrate the use of the character code tables.

You can find the character "A" in Page 0 as follows:

The decimal value for the character "A" is 65.

Follow its column straight up to find the digits.

Hexadecimal 4

Binary 0100

These numbers are the most significant bits of the ASCII code.

Follow its row to the left to find the digits.

Hexadecimal 1

Binary 0001

These numbers are the least significant bits of the ASCII code.

The combination of the numbers above is the ASCII code for the character "A".

Decimal 65

Hexadecimal 41

Binary 01000001

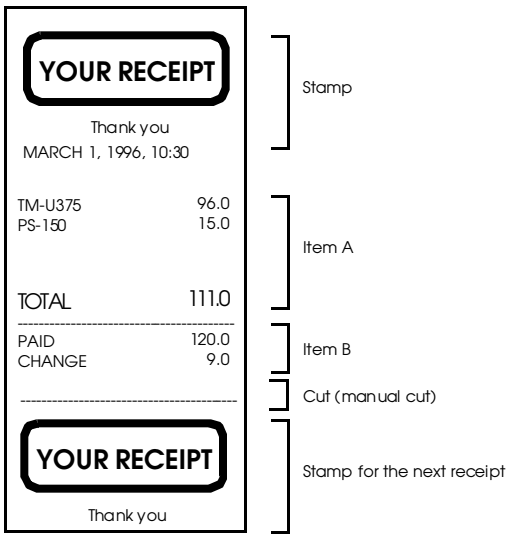
Chapter 2
Application

This chapter presents an example illustrating ESC/POS command functions and printing results. The example shows procedures and a program for combining system processes with the TM-U375, DM-D202II, and a drawer.

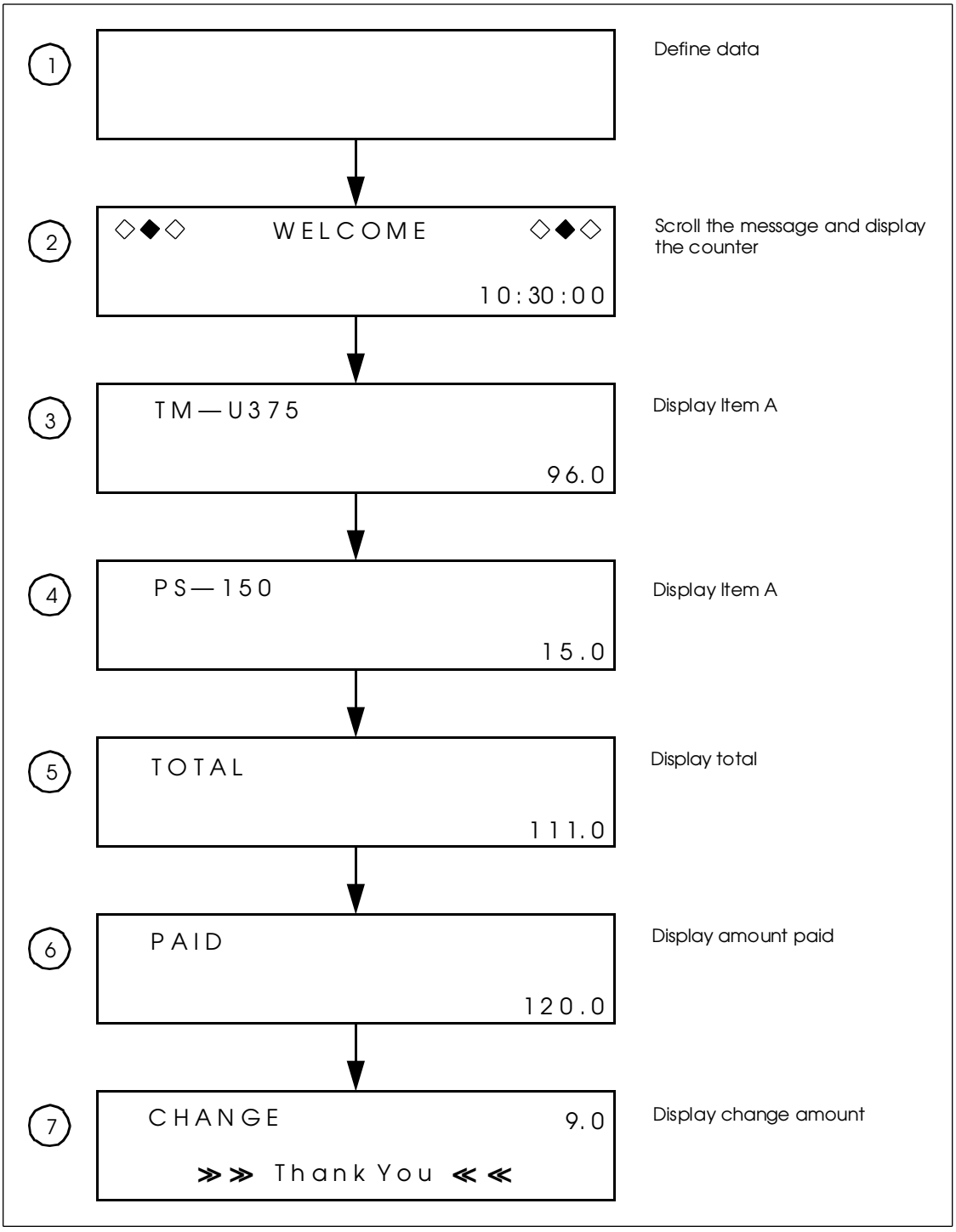
System Processing and Procedures

Procedure	Commands Used	Description
1. Define stamp data	**GS ***	Defines a downloaded bit image to be used as a stamp.
2. Stamp	**ESC =**, **ESC c 0**, **ESC a**, **GS /**, **ESC J**	Prints the specified stamp (downloaded bit image) in the center of the receipt at the print position defined by **ESC a**.
3. Display a message	**ESC =**	Selects only the customer display using **ESC =**. Displays a message and the time.
4. Print date and time	**ESC =**, **ESC d**	Selects only the printer using **ESC =**. Selects left justification after printing the date and time in the center of the receipt.
5. Print item A Display item A	**ESC a**, **ESC =**, **ESC !**, **LF**	Selects both the printer and customer display using **ESC =**. Prints and displays item A.
6. Print item B Display item B	**ESC =**, **ESC !**, **LF**, **ESC p**, **ESC d**	Selects only the printer using **ESC =** and prints item B. Displays the amount paid only on the customer display.
7. Display the amount of change and a message	**ESC =**	Selects only the customer display using **ESC =** and displays the amount of change and a message.
8. Stamp	**ESC =**, **ESC a**, **GS /**, **ESC J**	Prints the stamp (downloaded bit image) for the next receipt and advances the paper to the cut position. Uses the manual cutter to cut the paper.

Print Sample



Display Sample



Program Example

```
PRINT #1, CHR$(&H1B);"=";CHR$(3);    ← Selects peripheral devices (printer and customer display)
PRINT #1, CHR$(&H1B);"@";            ← Initializes the devices
PRINT #1, CHR$(&H1B);"t";CHR$(1);    ← Selects the character code table (page 1)
PRINT #1, CHR$(&H1B);"=";CHR$(1);    ← Selects peripheral device (printer)
PRINT #1, CHR$(&H1D);"*";CHR$(40);CHR$(6)
  FOR I=1 TO 1920
   READ a$: PRINT #1, CHR$(VAL("&H"+a$));
NEXT I

GOSUB stamp                          ← Prints stamp data

PRINT #1, CHR$(&H1B);"=";CHR$(2);    ← Selects peripheral device (customer display)
PRINT #1, CHR$(&HC);                 ← Clears customer display screen
PRINT #1, CHR$(229);CHR$(230);CHR$(229);"   WELCOME   ";
PRINT #1, CHR$(229);CHR$(230);CHR$(229);
PRINT #1, CHR$(&H1F);"T";CHR$(10);CHR$(30);    ← Sets and displays a counter (time)

W$=INPUT$(1)                         ← Waits for input
PRINT #1, CHR$(&HC);                 ← Clears customer display screen
PRINT #1, CHR$(&H1B);"=";CHR$(1);    ← Selects peripheral device (printer)
PRINT #1, "MARCH 1, 1996, 10:30";
PRINT #1, CHR$(&H1B);"d";CHR$(3);

PRINT #1, CHR$(&H1B);"a";CHR$(0);    ← Selects print position (left justification)
PRINT #1, CHR$(&H1B);"!";CHR$(1);
PRINT #1, CHR$(&H1B);"=";CHR$(3);    ← Selects peripheral devices (printer and customer display)
PRINT #1, "TM-U375                        96.0"; CHR$(&HA); CHR$(&HB);
W$=INPUT$(1)                         ← Waits for input
PRINT #1, "PS-150                         15.0"; CHR$(&HA); CHR$(&HB);

W$=INPUT$(1)                         ← Waits for input
PRINT #1, CHR$(&H1B);"=";CHR$(1);    ← Selects peripheral device (printer)
PRINT #1, CHR$(&HA);
PRINT #1, CHR$(&H1B);"!";CHR$(17);
PRINT #1, CHR$(&H1B);"=";CHR$(3);    ← Selects peripheral devices (printer and customer display)
PRINT #1, "TOTAL                        111.0"; CHR$(&HA)
```

Defines user-defined bit image

Displays a message

Prints date and time

Prints and displays item A

```
W$=INPUT$(1)                          ← Waits for input
PRINT #1, CHR$(&H1B);"=";CHR$(1);     ← Selects peripheral device (printer)
PRINT #1, CHR$(&H1B);"!";CHR$(1);
PRINT #1, "----------------------------------------"; CHR$(&HA);
PRINT #1, CHR$(&H1B);"=";CHR$(3);     ← Selects peripheral devices (printer and customer display)
PRINT #1, "PAID                              120.0"; CHR$(&HA)
PRINT #1, CHR$(&H1B);"=";CHR$(1);     ← Selects peripheral device (printer)
PRINT #1, CHR$(&H1B);"p";CHR$(0);CHR$(2);CHR$(20);← Operates a drawer
PRINT #1, "CHANGE                              9.0"; CHR$(&HA);
PRINT #1, CHR$(&H1B);"d";CHR$(6);

PRINT #1, CHR$(&H1B);"=";CHR$(2);    ← Selects peripheral device (customer display)
PRINT #1, CHR$(&HC);                 ← Clears customer display screen
PRINT #1, "CHANGE           9.0";
PRINT #1, CHR$(237);CHR$(237);"   Thank You   ";CHR$(236);CHR$(236);

GOSUB Stamp ← Prints stamp data
END

Stamp:
  PRINT #1, CHR$(&H1B);"=";CHR$(1);  ← Selects peripheral device (printer)
  PRINT #1, CHR$(&H1B);"c0";CHR$(1); ← Selects print sheet (receipt)
  PRINT #1, CHR$(&H1B);"a";CHR$(1);  ← Selects print position (center)
  PRINT #1, CHR$(&H1D);"/";CHR$(0);  ← Prints downloaded bit-image
  PRINT #1, CHR$(&H1B);"J";CHR$(10);
  PRINT #1, "Thank you";
  PRINT #1, CHR$(&H1B);"J"CHR$(30);
RETURN


(Any additional data is omitted from the downloaded bit image.)
```

Prints and displays Item B

Displays change and a message

Executes the stamp

Chapter 3
Command Reference

Command Classification

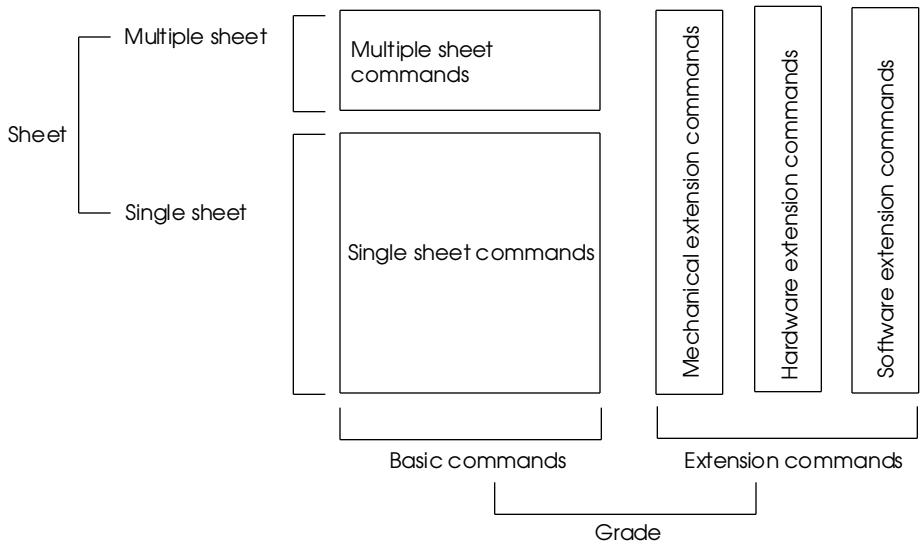
ESC/POS printer commands in this chapter are classified by function and by *sheet* and *grade*. The sheet and grade classification is called *matrix classification*.

The *sheet* classification is divided into *single sheet commands* and *multiple sheet commands*. The *grade* classification is separated into *basic commands* and *extension commands*.

Basic commands are defined as fundamental printer controls, including print commands and character type selection commands. *Extension commands* are defined as control codes for functions specific to individual printers. These commands are further divided into *mechanical extension commands* that relate to additional mechanical functions such as stamp and auto-cutter units, *hardware extension commands* that relate to additional hardware functions such as panel button control, and *software extension commands* that relate to additional software functions such as user-defined and Bar code control.

The commands can also be classified by function, which is how they are presented in Chapter 1 and the Function Type table in this chapter. The function types, such as Print Commands and Line Spacing Commands, are briefly explained in the corresponding sections of Chapter 1.

The illustration below shows the ESC/POS command overview diagram for printers.



Function Classification

Function Type	Command	Name	Matrix Category	Supported Command
Print commands	**LF**	Print and line feed	Basic single	○
	FF	1. Print and eject cut sheet (in standard mode)	Mechanical extension	○
		2. Print and return to standard mode (in page mode)	Mechanical extension	○
		3. Print and feed label to print starting position (on label)	Mechanical extension	
	CR	Print and carriage return	Mechanical extension	○
	ESC FF	Print data in page mode	Software extension	
	ESC J	Print and feed paper	Mechanical extension	○
	ESC K	Print and reverse feed	Mechanical extension	
	ESC d	Print and feed ***n*** lines	Basic single	○
	ESC e	Print and reverse feed ***n*** lines	Mechanical extension	
	GS FF	Print and eject label	Hardware extension	
Line spacing commands	**ESC 2**	Select default line spacing	Mechanical extension	○
	ESC 3	Set line spacing	Mechanical extension	○
	ESC C	Set cut sheet eject length	Mechanical extension	○
Character commands	**CAN**	Cancel print data in page mode	Software extension	○
	ESC SP	Set right-side character spacing	Basic single	○
	ESC !	Select print mode(s)	Basic single	○
	ESC %	Select/cancel user-defined character set	Software extension	○
	ESC &	Define user-defined characters	Software extension	○
	ESC –	Turn underline mode on/off	Software extension	○
	ESC ?	Cancel user-defined characters	Software extension	○
	ESC E	Turn emphasized mode on/off	Software extension	○
	ESC G	Turn double-strike mode on/off	Software extension	○
	ESC R	Select an international character set	Basic single	○
	ESC V	Turn 90° clockwise rotation mode on/off	Software extension	○
	ESC r	Select print color	Mechanical extension	
	ESC t	Select character code table	Basic single	○

The TM-U375/U375P supports the commands marked with a ○ in the "Supported Command" column.
The TM-U375P supports the commands marked with a ● in the "Supported Command" column.

Function Type	Command	Name	Matrix Category	Supported Command
Character commands (continued)	**ESC z**	Turn parallel printing mode on/ off for receipt and journal	Mechanical extension	
	ESC {	Turn upside-down printing mode on/off	Basic single	○
	GS !	Select character size	Software extension	
	GS B	Turn white/black reverse printing mode on/off	Software extension	
	GS b	Turn smoothing mode on/off	Software extension	
Panel button commands	**ESC c 5**	Enable/disable panel buttons	Hardware extension	○
	ESC c 6	Enable/disable on-line button	Hardware extension	
Printing paper commands	**ESC c 0**	Select paper type(s) for printing	Basic multiple	○
	ESC c 1	Select paper type(s) for command settings	Mechanical extension	○
	ESC f	Set cut sheet wait time	Mechanical extension	○
Paper sensor commands	**ESC c 3**	Select paper sensor(s) to output paper-end signals	Mechanical extension	●
	ESC c 4	Select paper sensor(s) to stop printing	Mechanical extension	○
Print position commands	**HT**	Horizontal tab	Software extension	○
	RS	Journal tab	Mechanical extension	
	ESC $	Set absolute print position	Software extension	○
	ESC D	Set horizontal tab positions	Software extension	○
	ESC T	Select print direction in page mode	Software extension	○
	ESC W	Set printing area in page mode	Software extension	○
	**ESC **	Set relative print position	Software extension	○
	ESC a	Select justification	Software extension	○
	GS $	Set absolute vertical print position in page mode	Software extension	
	GS L	Set left margin	Software extension	○
	GS W	Set printing area width	Software extension	○
	**GS **	Set relative vertical print position in page mode	Software extension	
Bit-image commands	**ESC ✻**	Select bit-image mode	Basic single	○
	GS ✻	Define downloaded bit image	Software extension	○
	GS /	Print downloaded bit image	Software extension	○

The TM-U375/U375P supports the commands marked with a ○ in the "Supported Command" column.
The TM-U375P supports the commands marked with a ● in the "Supported Command" column.

Function Type	Command	Name	Matrix Category	Supported Command
Status commands	**DLE EOT**	Real-time status transmission	Hardware extension	○
	DLE EOT BS	Real-time MICR status transmission	Hardware extension	
	ESC u	Transmit peripheral device status	Hardware extension	○
	ESC v	Transmit paper sensor status	Hardware extension	○
	GS ENQ	Transmit real-time printer status	Hardware extension	
	GS a	Enable/disable Automatic Status Back (ASB)	Hardware extension	○
	GS r	Transmit status	Hardware extension	○
Mechanism control commands	**ESC <**	Return home	Mechanical extension	○
	ESC F	Set/cancel cut sheet reverse eject	Mechanical extension	
	ESC U	Turn unidirectional printing mode on/off	Mechanical extension	○
	ESC i	Partial cut (one point left uncut)	Mechanical extension	
	ESC m	Partial cut (three points left uncut)	Mechanical extension	
	ESC o	Stamp	Mechanical extension	
	ESC q	Paper release	Mechanical extension	○
	GS V	Select cut mode and cut paper	Mechanical extension	
Bar code commands	**GS H**	Select printing position of HRI characters	Software extension	
	GS f	Select font for HRI characters	Software extension	
	GS h	Set bar code height	Software extension	
	GS k	Print bar code	Software extension	
	GS w	Set bar code width	Software extension	
Macro function commands	**GS :**	Start/end macro definition	Software extension	
	GS ^	Execute macro	Software extension	
Kanji control commands	**FS !**	Select print mode(s) for Kanji characters	Software extension	
	FS &	Select Kanji character mode	Software extension	
	FS –	Turn underline mode on/off for Kanji characters	Software extension	
	FS .	Cancel Kanji character mode	Software extension	
	FS 2	Define user-defined Kanji characters	Software extension	
	FS C	Select Kanji character code system	Software extension	
	FS S	Set Kanji character spacing	Software extension	
	FS W	Turn quadruple-size mode on/off for Kanji characters	Software extension	

The TM-U375/U375P supports the commands marked with a ○ in the "Supported Command" column.
The TM-U375P supports the commands marked with a ● in the "Supported Command" column.

Function Type	Command	Name	Matrix Category	Supported Command
MICR commands	**FS a 0**	Read check paper	Mechanical extension	
	FS a 1	Load check paper to print starting position	Mechanical extension	
	FS a 2	Eject check paper	Mechanical extension	
	FS b	Request retransmission of check paper reading result	Mechanical extension	
	FS c	MICR mechanism cleaning	Mechanical extension	
Miscellaneous function commands	**DLE ENQ**	Real-time request to printer	Software extension	○
	ESC =	Select peripheral device	Software extension	○
	ESC @	Initialize printer	Basic single	○
	ESC L	Select page mode	Software extension	○
	ESC S	Select standard mode	Software extension	
	ESC p	Generate pulse	Hardware extension	○
	FS L	Select double-density page mode	Software extension	
	GS <	Initialize printer mechanism	Mechanical extension	
	GS A	Adjust label print starting position	Hardware extension	
	GS C 0	Select counter print mode	Software extension	
	GS C 1	Select count mode (A)	Software extension	
	GS C 2	Set counter	Software extension	
	GS C ;	Select count mode (B)	Software extension	
	GS E	Select head control method	Hardware extension	○
	GS I	Transmit printer ID	Hardware extension	○
	GS P	Set horizontal and vertical motion units	Software extension	○
	GS c	Print counter	Software extension	
	GS z 0	Set on-line recovery wait time	Mechanical extension	

The TM-U375/U375P supports the commands marked with a ○ in the "Supported Command" column.
The TM-U375P supports the commands marked with a ● in the "Supported Command" column.

Reference Table

Command	Name	Function	Supported Command																	
			TM-267II	TM-T Series				TM-L Series		TM-U200		TM-300/300M				TM-270	TM-U375 TM-U375M	TM-U925	TM-U950 TM-U950M	TM-215S	TM-295
				T60	T80	T80M	T85	L60	L60II	B	D	A	B	C	D						
HT	Horizontal tab	Moves the printing position to the next horizontal tab position.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●
LF	Print and line feed	Prints the data in the print buffer and feeds one line based on the current line spacing.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
FF	1. Print and eject cut sheet (in standard mode)	Prints the data in the print buffer and ejects the cut sheet.														●	●	●	●		●
	2. Print and return to standard mode (in page mode)	Prints the data in the print buffer and returns to standard mode.					●		●								●				●
	3. Print and feed label to print starting position (on label)	Prints the data in the print buffer and feeds the next label to the print starting position.						●	●												

The commands supported by each printer are marked by a ● or a O. The functions of the commands marked by a O may differ, depending on the printer model.

Command	Name	Function	Supported Command																	
			TM-267II	TM-T Series				TM-L Series		TM-U200		TM-300/300M				TM-270	TM-U375 TM-U375M	TM-U925	TM-U950 TM-U950M	TM-215S	TM-295
				T60	T80	T80M	T85	L60	L60II	B	D	A	B	C	D						
CR	Print and carriage return	When auto line feed is enabled, this command functions in the same way as **LF**. When auto line feed is disabled, this command prints the data in the print buffer and does not feed the paper.		○	○		○		○	●	●	●	●	●	●	○	●	●	●	●	○
CAN	Cancel print data in page mode	Deletes all the print data in the current printing area in page mode.					●		●								●				●
RS	Journal tab	Moves the print position to the beginning of the journal paper.																	●		
DLE EOT	Real-time status transmission	Transmits a specified status in real time.					●		●	●	●						●	●	●		●
DLE EOT BS	Real-time MICR status transmission	Transmits MICR status in real time.																○	○		
DLE ENQ	Real-time request to printer	Responds to a request from the host computer in real time.					●			●	●						●	●	●		
ESC FF	Print data in page mode	Prints the data in the print buffer in page mode.					●		●												
ESC SP	Set right-side character spacing	Sets the right-side character spacing.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

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Command	Name	Function	Supported Command																	
			TM-267II	TM-T Series				TM-L Series		TM-U200		TM-300/300M				TM-270	TM-U375 TM-U375M	TM-U925	TM-U950 TM-U950M	TM-215S	TM-295
				T60	T80	T80M	T85	L60	L60II	B	D	A	B	C	D						
ESC !	Select print mode(s)	Selects a print mode(s).	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ESC $	Set absolute print position	Sets the print starting position from the beginning of the line.		●	●	●	●	●	●								●	●	●		
ESC %	Select/ cancel user-defined character set	Selects or cancels the user-defined character set.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ESC &	Define user-defined characters	Defines user-defined characters for a specified character code.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ESC *	Select bit-image mode	Selects a bit-image mode for a specified number of dots.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ESC –	Turn underline mode on/off	Turns underline mode on or off.				●	●	●	●	●	●	○	○	○	○		●	●	●		
ESC 2	Select default line spacing	Sets the line spacing to 1/6 inch.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ESC 3	Set line spacing	Sets the line spacing to a specified value.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ESC <	Return home	Moves the print head to the home position.								●	●	●	●	●	●		●	●	●		
ESC =	Select peripheral device	Selects the device to which the host computer sends data.		●	●	●	●	●	●	●	●						●	●	●		●
ESC ?	Cancel user-defined characters	Cancels the user-defined characters for a specified character code.					●		●	●	●						●	●	●		

The commands supported by each printer are marked by a ● or a O. The functions of the commands marked by a O may differ, depending on the printer model.

Command	Name	Function	Supported Command																	
			TM-267II	TM-T Series				TM-L Series		TM-U200		TM-300/300M				TM-270	TM-U375 TM-U375M	TM-U925	TM-U950 TM-U950M	TM-215S	TM-295
				T60	T80	T80M	T85	L60	L60II	B	D	A	B	C	D						
ESC @	Initialize printer	Clears the data in the print buffer and resets the printer mode to the mode that was in effect when the power was turned on.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ESC C	Set cut sheet eject length	Sets the eject length for cut sheet to a specified number of lines.														●	●	●	●		●
ESC D	Set horizontal tab positions	Sets the horizontal tab positions.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●			●	●
ESC E	Turn emphasized mode on/off	Turns emphasized mode on or off.				●	●	●	●	●	●	○	○	○	○		●	●	●		
ESC F	Set/cancel cut sheet reverse eject	Sets or cancels the cut sheet reverse eject.																			●
ESC G	Turn double-strike mode on/off	Turns double-strike mode on or off.				●	●	●	●	●	●	○	○	○	○		●	●	●		
ESC J	Print and feed paper	Prints the data in the print buffer and feeds the paper a specified distance.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ESC K	Print and reverse feed	Prints the data in the print buffer and feeds the paper a specified distance in the reverse direction.									●				●			●	●		●
ESC L	Select page mode	Switches from standard mode to page mode.					●		●								●				●

The commands supported by each printer are marked by a ● or a O. The functions of the commands marked by a O may differ, depending on the printer model.

Command	Name	Function	Supported Command																	
			TM-267II	TM-T Series				TM-L Series		TM-U200		TM-300/300M				TM-270	TM-U375 TM-U375M	TM-U925	TM-U950 TM-U950M	TM-215S	TM-295
				T60	T80	T80M	T85	L60	L60II	B	D	A	B	C	D						
ESC R	Select an international character set	Selects a country's character set.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ESC S	Select standard mode	Switches from page mode to standard mode.					●		●												
ESC T	Select print direction in page mode	Selects the print direction and starting position in page mode.					●		●								●				●
ESC U	Turn unidirectional printing mode on/off	Turns unidirectional printing mode on or off.								●	●	●	●	●	●		●	●	●	●	
ESC V	Turn 90° clockwise rotation mode on/off	Turns 90° clockwise rotation mode on or off.		●	●	●	●	●	●							●	●				
ESC W	Set printing area in page mode	Sets the position and size of the printing area in page mode.					●		●								●				●
**ESC **	Set relative print position	Sets the print starting position based on the current position.		●	●	●	●	●	●								●	●	●		
ESC a	Select justification	Aligns all the data in one line to a specified position.		●	●	●	●	●	●	●	●						●	●	●		
ESC c 0	Select paper type(s) for printing	Selects paper type(s) for printing.												●	●	●	●	●	●		
ESC c 1	Select paper type(s) for command settings	Selects paper type(s) for use with various command settings.														●	●	●	●		

The commands supported by each printer are marked by a ● or a O. The functions of the commands marked by a O may differ, depending on the printer model.

Command	Name	Function	Supported Command																	
			TM-267II	TM-T Series				TM-L Series		TM-U200		TM-300/300M				TM-270	TM-U375 TM-U375M	TM-U925	TM-U950 TM-U950M	TM-215S	TM-295
				T60	T80	T80M	T85	L60	L60II	B	D	A	B	C	D						
ESC c 3	Select paper sensor(s) to output paper-end signals	Selects paper sensor(s) to output paper-end signals.		○	○		○		○	○	○	○	○	○	○	○	○		○		○
ESC c 4	Select paper sensor(s) to stop printing	Selects the paper sensor that stops printing when the paper runs out.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●
ESC c 5	Enable/disable panel buttons	Enables or disables the panel buttons.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ESC c 6	Enable/disable on-line button	Enables or disables the on-line button.	●													●					
ESC d	Print and feed ***n*** lines	Prints the data in the print buffer and feeds ***n*** lines.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ESC e	Print and reverse feed ***n*** lines	Prints the data in the print buffer and feeds ***n*** lines in the reverse direction.									●				●			●	●		●
ESC f	Set cut sheet wait time	Sets the time that the printer waits for cut sheet to be inserted and the time from insertion of the sheet until printing starts.												●	●	●	●	●	●		●
ESC i	Partial cut (one point left uncut)	Executes a partial cut of the paper with one point left uncut.	●		●	●	●					●	●					●	●		
ESC m	Partial cut (three points left uncut)	Executes a partial cut of the paper with three points left uncut.	●		●	●						●	●					●	●		

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Command	Name	Function	Supported Command																	
			TM-267II	TM-T Series				TM-L Series		TM-U200		TM-300/300M				TM-270	TM-U375 TM-U375M	TM-U925	TM-U950 TM-U950M	TM-215S	TM-295
				T60	T80	T80M	T85	L60	L60II	B	D	A	B	C	D						
ESC o	Stamp	Executes stamp printing.																●	●		
ESC p	Generate pulse	Outputs a specified pulse to a specified connector pin.		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ESC q	Paper release	Releases the paper.														●	●				●
ESC r	Select print color	Selects the print color.	●									●	●	●	○					●	
ESC t	Select character code table	Selects a page from the character code table.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
ESC u	Transmit peripheral device status	Transmits the status of a specified connector pin.		○	○	●	●	●	●			○	○	○	○	○	●	●	●	●	●
ESC v	Transmit paper sensor status	Transmits the status of a paper sensor.	●	○	○	●	●	●	●			○	○	○	○	○	●	●	●	●	●
ESC z	Turn parallel printing mode on/off for receipt and journal	Turns parallel printing mode on or off for receipt and journal paper.																	●		
ESC {	Turn upside-down printing mode on/off	Turns upside-down printing mode on or off.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
FS !	Select print mode(s) for Kanji characters	Selects print mode(s) for Kanji characters.				●						○	○	○	○		○		○		
FS &	Select Kanji character mode	Selects Kanji character mode.				●						○	○	○	○		○		○		

The commands supported by each printer are marked by a ● or a O. The functions of the commands marked by a O may differ, depending on the printer model.

Command	Name	Function	Supported Command																	
			TM-267II	TM-T Series				TM-L Series		TM-U200		TM-300/300M				TM-270	TM-U375 TM-U375M	TM-U925	TM-U950 TM-U950M	TM-215S	TM-295
				T60	T80	T80M	T85	L60	L60II	B	D	A	B	C	D						
FS –	Turn underline mode on/off for Kanji characters	Turns underline mode on or off for Kanji characters.				●						○	○	○	○		○		○		
FS .	Cancel Kanji character mode	Cancels Kanji character mode.				●						○	○	○	○		○		○		
FS 2	Define user-defined Kanji characters	Defines user-defined Kanji characters for specified character codes.				●						○	○	○	○		○		○		
FS C	Select Kanji character code system	Selects the Kanji character code system.				●						○	○	○	○		○		○		
FS L	Select double-density page mode	Switches from standard mode to double-density page mode.															○				
FS S	Set Kanji character spacing	Sets the right- and left-side Kanji character spacing.				●						○	○	○	○		○		○		
FS W	Turn quadruple-size mode on/off for Kanji characters	Turns quadruple-size mode on or off for Kanji characters.				●						○	○	○	○		○		○		
FS a 0	Read check paper	Selects the MICR function and reads the check paper.																○	○		
FS a 1	Load check paper to print starting position	Loads check paper to the print starting position.																○	○		
The commands supported by each printer are marked by a ● or a O. The functions of the commands marked by a O may differ, depending on the printer model.																					

Command	Name	Function	Supported Command																	
			TM-267II	TM-T Series				TM-L Series		TM-U200		TM-300/300M				TM-270	TM-U375 TM-U375M	TM-U925	TM-U950 TM-U950M	TM-215S	TM-295
				T60	T80	T80M	T85	L60	L60II	B	D	A	B	C	D						
FS a 2	Eject check paper	Ejects the check paper.																○	○		
FS b	Request retransmission of check paper reading result	Retransmits the previous check paper reading results.																○	○		
FS c	MICR mechanism cleaning	Cleans the MICR mechanism.																○	○		
GS ENQ	Transmit real-time printer status	Transmits the status of the printer in real time.																●	●		
GS FF	Print and eject label	Prints the data in the print buffer and ejects the label.						●	●												
GS !	Select character size	Selects the character width and height.					●		●												
GS $	Set absolute vertical print position in page mode	Sets the absolute vertical print starting position in page mode.					●		●												
GS *	Define downloaded bit image	Defines a downloaded bit image using a specified number of dots.		●	●	●	●	●	●								●	●	●		
GS /	Print downloaded bit image	Prints a downloaded bit image using a specified mode.		●	●	●	●	●	●								●	●	●		
GS :	Start/end macro definition	Starts or ends a macro definition.		●	●	●	●	●	●												

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Command	Name	Function	Supported Command																	
			TM-267II	TM-T Series				TM-L Series		TM-U200		TM-300/300M				TM-270	TM-U375 TM-U375M	TM-U925	TM-U950 TM-U950M	TM-215S	TM-295
				T60	T80	T80M	T85	L60	L60II	B	D	A	B	C	D						
GS <	Initialize printer mechanism	Feeds a label to the print starting position.						●	●												
GS A	Adjust label print starting position	Adjusts the label position relative to the default position.						●	●												
GS B	Turn white/ black reverse printing mode on/off	Turns white/black reverse printing mode on or off.					●		●												
GS C 0	Select counter print mode	Selects a print mode for the serial counter.						●	●												
GS C 1	Select count mode (A)	Selects a count mode for the serial counter.						●	●												
GS C 2	Set counter	Sets the serial counter value.						●	●												
GS C ;	Select count mode (B)	Selects a count mode for the serial counter and specifies the counter value.						●	●												
GS E	Select head control method	Selects the print speed and head energizing time.										●	●	●	●		●	●	●		
GS H	Select printing position of HRI characters	Selects the printing position of HRI characters when printing a bar code.		●	●	●	●	●	●												
GS I	Transmit printer ID	Transmits a specified printer ID.					●		●	●	●						●	●	●		●

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Command	Name	Function	Supported Command																	
			TM-267II	TM-T Series				TM-L Series		TM-U200		TM-300/300M				TM-270	TM-U375 TM-U375M	TM-U925	TM-U950 TM-U950M	TM-215S	TM-295
				T60	T80	T80M	T85	L60	L60II	B	D	A	B	C	D						
GS L	Set left margin	Sets the left margin using specified values.					●		●								●				
GS P	Set horizontal and vertical motion units	Sets the horizontal and vertical motion units.					●		●								●	●	●		
GS V	Select cut mode and cut paper	Cuts the specified paper.					●			●											
GS V	Select cut mode and cut paper	Advances the specified paper to the cut position and performs the cut.					●			●	●										
GS W	Set printing area width	Sets the printing area width to a defined area.					●		●								●				
**GS **	Set relative vertical print position in page mode	Moves the vertical print starting position in page mode to a specified distance from the current position.					●		●												
GS ^	Execute macro	Executes a macro.		●	●	●	●	●	●												
GS a	Enable/ disable Automatic Status Back (ASB)	Selects a status for ASB transmission.					●		●	●	●						●	●	●		●
GS b	Turn smoothing mode on/off	Turns smoothing mode on or off.					●		●												

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Command	Name	Function	Supported Command																	
			TM-267II	TM-T Series				TM-L Series		TM-U200		TM-300/300M				TM-270	TM-U375 TM-U375M	TM-U925	TM-U950 TM-U950M	TM-215S	TM-295
				T60	T80	T80M	T85	L60	L60II	B	D	A	B	C	D						
GS c	Print counter	Stores a serial counter value in the print buffer and increments or decrements the counter value.						●	●												
GS f	Select font for HRI characters	Selects a font for the HRI characters used when printing a bar code.		●	●	●	●	●	●												
GS h	Set bar code height	Sets the height of a bar code.		●	●	●	●	●	●												
GS k	Print bar code ①	Selects a bar code system and prints the bar code.		●	●	●	●	●	●												
GS k	Print bar code ②	Selects a bar code system and prints the bar code.					●		●												
GS r	Transmit status	Transmits a specified status.					●		●	●	●						●	●	●		●
GS w	Set bar code width	Sets the horizontal size of the bar code.		●	●	●	●	●	●												
GS z 0	Set on-line recovery wait time	Sets the on-line recovery wait time.								●	●										

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